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ABSTRACT

This monograph reports findings of a Fall, 1995 survey of computing officials at approximately 650 two- and four-year colleges and universities across the United States concerning increasing use of technology on college campuses. Major findings include: the percentage of college courses using e-mail and multimedia resources more than doubled; the use of computer simulations and commercial software increased by more than 50 percent; seven million college students and faculty regularly used the Internet and World Wide Web (WWW); half of all college students and faculty have recurring instructional experience with information technology; more than half the responding institutions report a WWW home page; more than half of all college students and three-fourths of faculty have access to the Internet and WWW; six percent of all college courses tapped into Web-based resources to support instruction; three-fourths of respondents indicated that providing Internet and WWW training is a computing priority; and there is an increasing use of the Web for institutional promotion to off-campus audiences. Other findings indicate that replacing aging equipment and improving the technology infrastructure is a pressing issue at many institutions, that public institutions are turning to mandatory user fees to underwrite technology costs, and that most campuses do not have a financial plan for acquiring and retiring desktop computers. The report details the survey's findings in text and extensive tables and includes three appendixes: (1) explanation of the survey methodology; (2) the 1995 questionnaire itself; and (3) a list of participating institutions. (DB)

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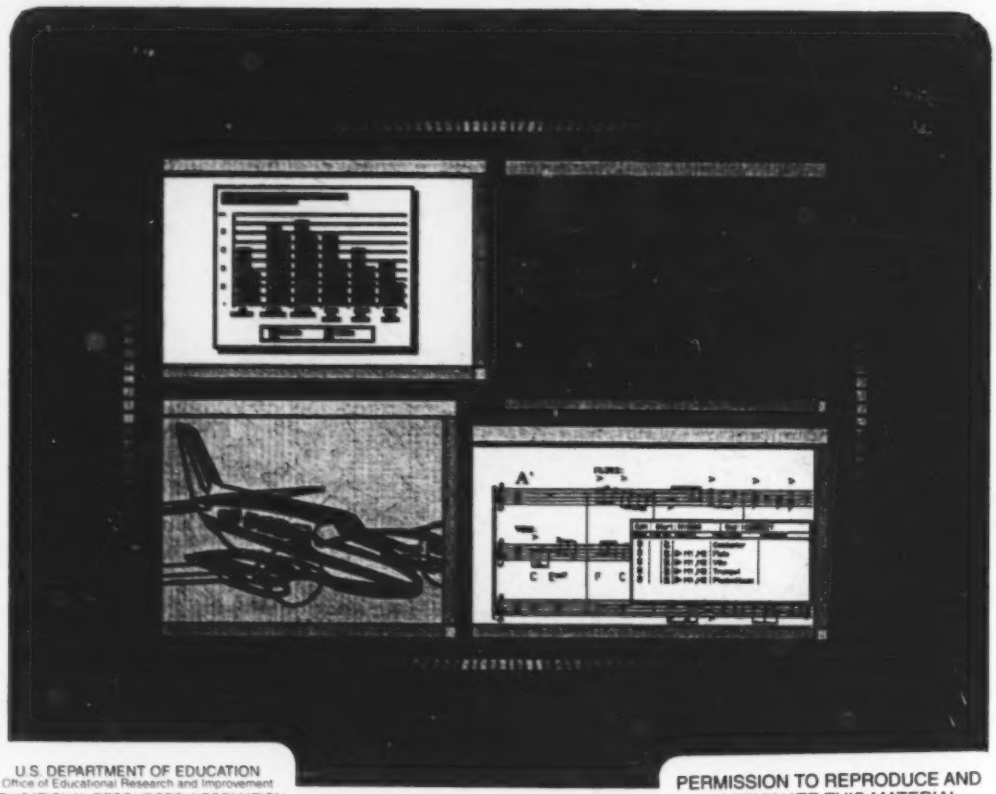
CAMPUS COMPUTING 1995

The Sixth National Survey of Desktop Computing in Higher Education



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CAMPUS COMPUTING, 1995

The Sixth National Survey of Desktop Computing in Higher Education

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THE CAMPUS COMPUTING PROJECT

Begun in 1990, the annual Campus Computing survey is the largest continuing study of campus planning, policies and procedures related to the use of desktop computers (personal computers and workstations) in American higher education.

The 1995 National Survey of Desktop Computing in Higher Education was supported, in part, by grants from the following corporate sponsors: Apple Computer, Compaq Computer Corp., Course Technology, Dell Computer Corp., Delmar Publishing Company, Follett Corp., HarperCollins Publishers, Hewlett-Packard, IBM, Richard D. Irwin, Inc., Lotus Development Corp., Microsoft Corp., Mosby-Year Book Company, Prentice Hall/Simon and Schuster, Silicon Graphics, Symantec Corp., Times Mirror Higher Education, and West Educational Publishing.

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CAMPUS COMPUTING, 1995

The 1995 National Survey of Desktop Computing in Higher Education

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CAMPUS COMPUTING, 1995

The 1995 National Survey of Desktop Computing in Higher Education

The 1995 National Survey of Desktop Computing in Higher Education was conducted during Summer and Fall 1995 as one component of the Technology, Teaching and Scholarship Project.[1] The information presented in this report is based on data from 645 two- and four-year colleges and universities across the United States. The annual Campus Computing survey, now in its sixth year, is the largest continuing study of the use of information technology in higher education.

The survey results summarize data from public and private universities, public and private four-year colleges, and from community colleges (i.e., public two-year institutions).[2] The survey respondents were individuals specifically responsible for and knowledgeable about the current direction of academic computing planning and policy implementation on their campuses.[3] The 1995 surveys were initially mailed in August to the senior academic computing officer at more than 1,500 colleges and universities across the United States.[4] Where it was not possible to identify a specific individual with an academic computing title, the survey was sent to the senior academic officer. (Additional information about the survey methodology is provided in Appendix A.)

The 1995 Survey Results

The use of information technology in college courses — including electronic mail, multimedia, CD-ROM, commercial courseware and computer simulations — grew dramatically this past year, as did the number of students and faculty routinely using the Internet and World Wide Web (WWW). The 1995 Campus Computing data reveal that the percentage of college courses using some form of information technology resource rose significantly between 1994 and 1995, increasing by at least one-half and in some cases doubling (Figure 1). The 1995 data also suggest that more than seven million college students and faculty regularly use the Internet and WWW.

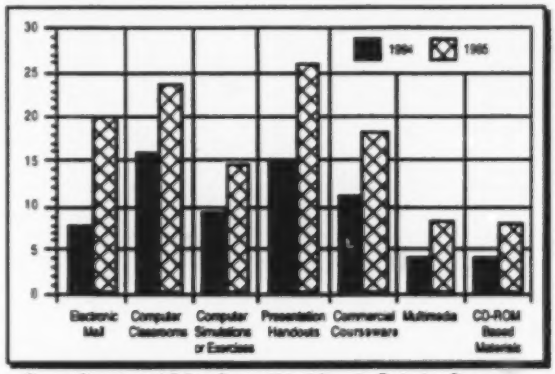

Figure 1: Percentage of College Courses Using Information Technology Resources, 1994-95, By Type of Resource

Indeed, following several decades of great aspirations and more than a dozen years of significant institutional investments, information technology has emerged as a permanent, respected, and increasingly essential component of the college experience. The 1995 data reveal that the use of information technology in instruction is finally moving past the early adopters and breaking into the ranks of mainstream faculty. Major gains in the use of information technology in instruction occurred across all types of institutions this past year.

The 1995 survey data suggest that upwards of half of all of college students and faculty now have some sort of recurring instructional experience with information technology resources and technology-based learning activities. These technology experiences go beyond the routine use of word processing (at one end of the continuum) and the technical expertise of computer programming (at the other); rather, these are experiences that extend the content of the syllabus, enrich classroom discourse, promote communication among class participants, and enhance the learning opportunity.

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[1]The 1995 National Survey of Desktop Computing in Higher Education was supported, in part, by grants by the following corporate sponsors: Apple Computer, Inc., Compaq Computer Corp., Course Technology, Dell Computer Corp., Delmar Publishing Company, Follett Corp., HarperCollins Publishers, Hewlett-Packard, IBM, Richard D. Irwin, Inc., Lotus Development Corp., Microsoft Corp., Mosby-Year Book Company, Prentice Hall/Simon and Schuster, Silicon Graphics, Symantec Corp., Times Mirror Higher Education, and West Educational Publishing.

[2]Several hundred private two-year colleges were including in the survey mailing. However, the low response rate from this group should not be viewed as being representative of the larger population of more than 250 private two-year colleges in the United States.

[3]The survey focuses on academic computing, i.e., the use of computing and information technology to support and enhance instruction and scholarship. The survey does not address the use of desktop computers in academic administration (e.g., budgeting, registration, financial management, student records).

[4]In prior years the survey was mailed in May or June. However, the impending launch of Windows 95 by Microsoft Corp. during Summer 1995 would have important consequences for technology planning and policies on many campuses; consequently, the 1996 survey was not mailed until after the August 1996 release of Windows 95.

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In essence, the much discussed "technology revolution" — in reality the slow, gradual movement of information technology resources into the curriculum and classroom experience — is picking up speed.[5] The survey data suggest growing numbers of college students expect a technology component in their courses; across all disciplines, growing numbers of faculty are utilizing technology resources to enhance the curriculum.

The rising use of technology resources points to real demand for quality commercial products. Given the rising use of information technology resources in instruction, the 1995 Campus Computing data bode well for individuals and companies interested in providing digital curriculum resources for higher education: college publishers, entrepreneurial faculty, and small firms focusing on the educational market.

In sum, 1995 data document recent and significant changes in the ways growing numbers faculty at all types of colleges and universities are now using technology as a resource in instruction.

The WWW in Higher Education

Not surprisingly, the use of the World Wide Web is growing rapidly on college campuses. More than half (55.2 percent) of the institutions participating in the 1995 survey report a WWW home page; still more campuses (25.8 percent) plan to raise an institutional flag in Cyberspace during the 1995/96 academic year (Figure 2). Public and private research universities and other institutions with a well-developed technology infrastructure are most likely to have home pages on the WWW.

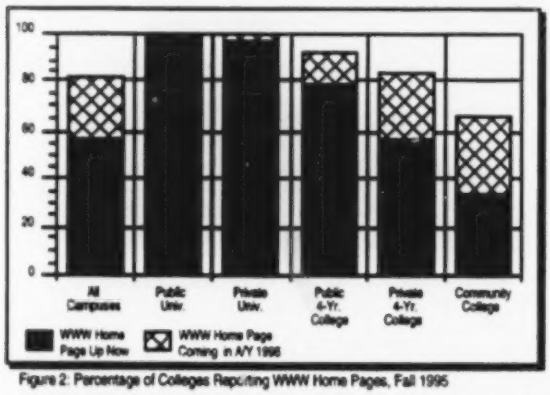

Figure 2: Percentage of Colleges Reporting WWW Home Pages, Fall 1995

The 1995 Campus Computing data suggest that more half of all college students and upwards of three-fourths of all faculty have access to the Internet and the WWW. Extrapolating from the survey data, it appears that as of Fall 1995, US colleges and universities account for more than seven million Internet and WWW users — students, faculty, administrators, and staff who have access to Cyberspace.

Many students and faculty routinely use the Internet and WWW in their daily activities. In this context, campus use continues to outpace activity in other sectors. For example, one widely cited Jan[illegible]996 commercial market report estimated so[illegible]illion Internet users in the United States. [illegible] 1995 Campus Computing data suggest that commercial and consumer market studies probably miss the huge numbers of faculty and students who use (indeed depend) on the Internet and WWW. Compared to the corporate sector, higher education was an early adopter of the Internet and, more recently, an important advocate for the Web. Across the country, Internet and WWW access are viewed by growing numbers faculty and students as both a core resource as well as a basic right, similar to a library card.

The 1995 data reveal that about six percent of all college courses currently tap into Web-based resources to support instruction. Three-fourths of the respondents (76.5 percent) indicate that "providing Internet/WWW training" will be a "very important" computing priority for their campuses over the next three years. Similarly, three-fourths (75.1 percent) report that Netscape, a widely used Internet browser, will be "very important" in their campus technology planning. Using Internet resources for instruction is a "very important" priority for more than two-thirds (71.5 percent) of the responding campuses, while more than half (50.3 percent) view Web pages for individual classes and courses as being "very important" over the next two-three years.

Although the WWW plays an interesting and increasingly important role in instruction and scholarship, many colleges and universities also recognize the Web as part of a digital public presence intended for off-campus clientele. The 1995 survey data indicate that colleges and universities are more likely to focus formal institutional plans for the Web on promotion to off-campuses audiences (38.1 percent), rather than instruction (24.4 percent) or distance education (12.5 percent; see Figure 3). Target audiences for these initiatives typically include prospective students, alumni, news organizations, and potential donors.

The focus of formal campus plans on the use of the WWW for off-campus audiences can be explained by two factors. First, campus officials typically hesitate to intervene directly in instruction. Consequently, an institutional mandate defining the role of the Web in instruction would be seen on many campuses as an intrusion into traditional departmental and faculty prerogatives to set program priorities and define pedagogical strategies. While growing numbers of faculty and academic departments want (and increasingly expect) institutional support for these efforts, few will readily accept institutional imperatives.

[5]See for example, Steven W. Gilbert, "Making the Most of a Slow Revolution" *Change* (March/April 1996), pp. 10-23. This special theme issue of *Change* focuses on information technology.

Second, as Internet access and Web use grows rapidly among the general population, institutional officials are increasingly concerned about look, feel, and content issues affecting a campus home page and Web site. In essence, growing numbers of campus officials recognize a Web site as a marketing tool and a competitive presence that can provide information and services to important off-campus constituencies.[6]

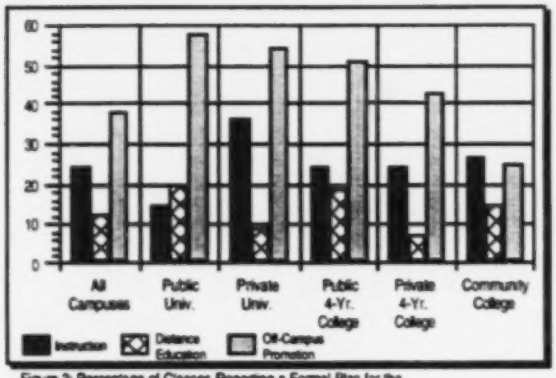

Figure 3: Percentage of Classes Reporting a Formal Plan for the WWW, Fall 1995

User Support Issues

Like their corporate counterparts, colleges and universities appear cautious about embracing Microsoft's Windows 95. Less than a quarter (23.3 percent) of the campuses participating in the 1995 survey support or recommend Windows 95 as of Fall 1995; however, more than half (56.8 percent) indicate that Windows 95 will become very important in their technology plans and strategy over the next two or three years (Figure 4). At many institutions, the slow transition to Windows 95 reflects concerns about significant migration costs: the need for new applications software, faster and more powerful computers, and rising demand for user support and training.

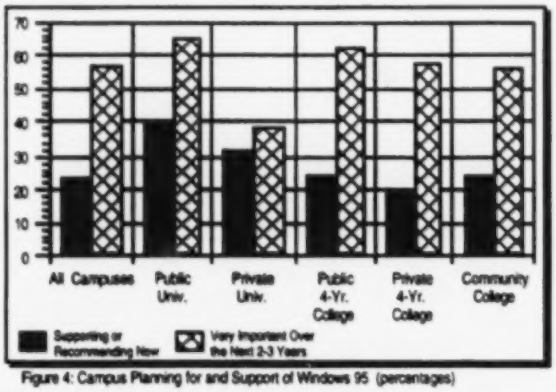

Figure 4: Campus Planning for and Support of Windows 95 (percentages)

[6]See Green, Kenneth C. "Digital Reflections: Planning Your Presence on the Web." *Change* (March/April 1996), pp. 67-70.

Indeed, user support issues now present a major financial and technological challenge for most institutions. Replacing aging equipment, updating obsolete software, supporting the migration to Windows 95, and providing training for faculty and students eager to explore the Internet and the WWW are top institutional priorities for survey respondents this year. (Figure 5).

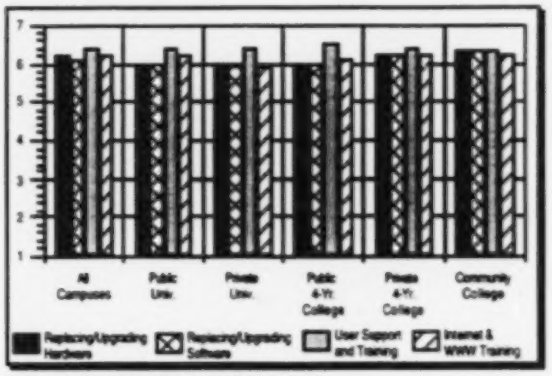

Figure 5: User Support Priorities by Campus Type (Scale: 1=not important; 7=very important)

In the context of user support, one-fourth of the respondents (24.3 percent) assess the overall campus technology infrastructure at their institution as "excellent." Less than a third (31.3 percent) rate networking and data communications very highly; less than a third (29.3 percent) also rate their telecommunications system highly. Cable and video capacity receive the lowest ranking: only one-eighth (12.9 percent) of the respondents rate their campus as "excellent" in this area. Research universities are most likely to give high marks to the campus network: over half (57.5 percent) of the public universities and more than a third (36.4 percent) of the private universities rate this part of the technology infrastructure as excellent. Video and cable services generally receive low ratings across all sectors (Figure 6, below.)

The 1995 data clearly indicate that infrastructure helps to foster innovation and the migration of information technology into the curriculum and the classroom. One key element of the technology infrastructure is a well-developed campus network; a second is the telecommunications system. Other important components include desktop computers with CD-ROM drives, the routine upgrading of hardware and software, multimedia-capable computers in faculty offices and student labs, and technical support to help students, faculty, administrators, and staff make effective and productive use of the technology.

Despite growing demand, the 1995 survey data also suggest that some parts of the campus infrastructure and user support services have not expanded to meet growing faculty need. For example, although the use of instructional technology resources in courses has grown

dramatically in recent years, the proportion of colleges and universities that have expanded their investment in instructional development (i.e., providing assistance to faculty eager to use technology resources in their instructional work) has remained flat — at about 32 percent — since 1990. Several factors help explain the "demise" of instructional development efforts over the past six years:

- *learning curve.* The learning curve is long and flat. Developing really good, really useful technology-based instructional material is far more complex than many faculty initially anticipated.

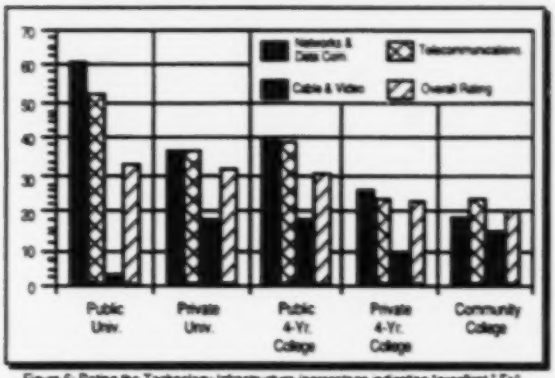

Figure 6: Rating the Technology Infrastructure (percentage indicating "excellent," Fall 1995).

- *sustained investment.* Institutions and academic programs have learned that instructional development is not a static activity. Rather, it requires a sustained investment. Most campuses (and even many enthusiastic faculty) have not been prepared to make the sustained investment of time, personnel (faculty and technical staff such as code writers and instructional designers), and financial resources required to develop "market quality" instructional resources.
- *patron support.* Foundations and technology firms provided a significant percentage of the early money that helped many institutions launch ambitious instructional development programs in the mid-1980s. But these early campus initiatives often did not deliver on their promises. Moreover, declining profit margins in parts of the technology industry means that many companies (e.g, Apple, Digital, and IBM) can no longer provide the gifts of "cash and kind" that helped underwrite projects.
- *pressing demand for more traditional user support.* Over the past five years, many colleges shifted the focus of user support away from instructional development (typically serving a small number of faculty) to assist the growing numbers of students, faculty, and administrators who require training.

Taken together, these factors help explain the decline in institutional support for instructional development, even as demand for instructional resources has been rising in recent years.

Acquiring and Retiring Technology Resources

Replacing aging equipment and improving the technology infrastructure is a pressing issue for many colleges and universities. Indeed, given the explosive sales of computers to consumers over the past two years, many students have better equipment in their dorm rooms and at home than they currently find in campus computer labs and clusters.

Public institutions are turning to mandatory user fees to help underwrite technology costs and provide new equipment for campus labs and public clusters. Almost half of the public universities (47.5 percent) and public four-year colleges (44.0 percent) report a computer use fee for students. One-fourth (26.0 percent) of community colleges also have a mandatory technology fee. In contrast, just over an eighth of private universities (13.6 percent) and a sixth of private four-year colleges (16.7 percent) impose a computer fee on their students.

As noted in past survey reports, most colleges and universities across the United States still do not have a financial plan for "acquiring and retiring" desktop computers. In Fall 1995, a little more than a fifth (22.0 percent) report a budget model for amortizing and routinely replacing computers and software, up slightly from 15.9 percent in 1990. However, the vast majority of colleges and universities (78.0 percent) continue to fund much of their equipment purchases and software upgrades with one-time budget allocations or special appropriations.

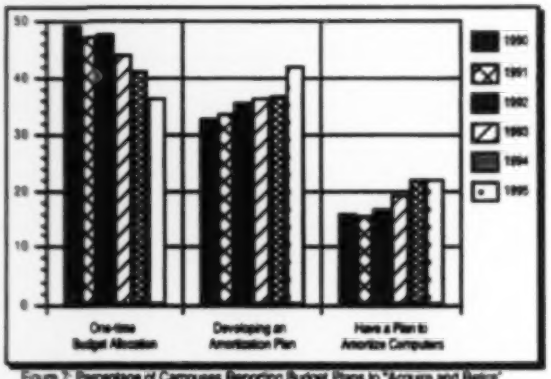

Figure 7: Percentage of Campuses Reporting Budget Plans to "Acquire and Retire" Equipment and Software, 1990-1995

The survey data shown in Figure 7 reflect the continuing problems colleges and universities have in developing a viable financial plan for their technology needs. Budgeting models at most campuses do not allow institutions to plan for the routine replacement of aging technology resources; instead, the majority of institutions continue to "find" money rather than reserve funds to replace aging equipment.

The 1995 Campus Computing data are based on data from 645 two- and four-year colleges and universities collected during Fall, 1995.

GENERAL CAMPUS POLICIES ABOUT DESKTOP COMPUTERS	All Insts.	Universities		Four-Year Colleges		Two-Year Colleges	
		Public	Private	Public	Private	Public	Private
Do you have a formal policy on computers							
For curriculum utilization?	25.6	17.5	18.2	29.9	22.8	29.6	18.5
For undergraduates?	27.6	23.1	22.7	33.0	26.9	25.9	34.6
For graduate students?	11.2	17.9	9.5	18.4	13.0	3.7	0.0
Do you have a computer instruction or computer competency requirement?	36.0	27.5	4.5	37.6	38.0	36.9	44.4
Do you have a special computer use fee or annual/term computer use charge?	28.3	47.5	14.3	49.1	16.4	26.9	36.0
Do you have formal policy on confidentiality of computer data?	59.5	68.4	86.4	70.8	57.5	55.3	29.6
Do you have formal policy regarding development of software by faculty and staff	18.1	38.5	22.7	28.4	7.6	22.1	0.0
O/S recommended/supported*							
Macintosh	72.8	90.0	86.4	87.5	76.0	61.7	33.3
UNIX	51.0	82.5	90.9	67.9	49.8	37.8	14.8
Solaris	13.2	47.5	45.5	21.4	9.8	3.8	3.7
MS-DOS	11.2	27.5	22.7	8.9	12.9	5.3	18.5
Windows 3.x	89.9	87.5	90.9	91.1	89.8	90.9	81.5
Windows NT	24.6	45.0	40.9	26.8	23.6	20.6	11.1
Windows '95	23.3	40.0	31.8	24.1	20.0	23.9	11.1
OS/2 Warp	7.6	5.0	18.2	9.8	5.8	7.7	7.4
None recommended	3.3	5.0	4.5	0.9	2.2	4.3	11.1
Do you require or strongly recommend microcomputer ownership?							
No	81.3	67.5	45.5	84.8	78.2	89.5	77.8
Yes, for students in specific disciplines/programs	10.6	27.5	22.7	11.6	9.3	7.7	3.7
Yes, for students in individual acad units	2.4	5.0	18.2	0.9	2.2	1.0	3.7
Yes, for all students	6.5	5.0	22.7	4.5	10.2	1.4	11.1
Are there recommended brands*							
For students?	23.1	25.0	40.9	23.6	32.9	11.7	11.1
For faculty?	47.4	37.5	50.0	56.3	57.0	37.7	18.5
For administrators/staff?	52.8	35.0	59.1	62.5	61.1	43.5	37.0
What desktop computers recommended*							
Any Macintosh	39.1	42.5	50.0	55.4	47.6	23.0	11.1
68000-based systems	14.6	20.0	13.6	20.5	16.4	10.5	0.0
Power PC systems	35.0	40.0	36.4	50.9	44.0	18.7	11.1
Notebook computers	14.8	22.5	18.2	22.3	17.8	7.7	0.0
Any PC (IBM/Wintel) compatible	62.5	50.0	68.2	70.5	68.9	55.0	48.1
486 systems	40.0	32.5	27.3	45.5	39.6	40.7	37.0
Pentium systems	55.6	50.0	63.6	64.3	61.3	48.8	25.9
Power PC systems	6.5	10.0	4.5	7.1	4.9	8.1	0.0
Notebook computers	20.6	22.5	22.7	28.6	20.9	17.2	7.4
Any UNIX System	27.6	40.0	45.5	40.2	28.4	18.7	3.7
DEC	8.3	25.0	18.2	16.1	6.2	2.9	3.7
HP	7.2	17.5	9.1	7.1	8.0	5.3	0.0
IBM	5.0	15.0	0.0	5.4	4.4	4.8	0.0
Sun	7.9	17.5	18.2	8.9	5.3	8.1	0.0
Other Unix systems	11.8	32.5	27.3	20.5	12.0	2.9	0.0

Percentages by Campus Category

**** Columns may total more than 100% since responses were not exclusive***

CURRENT MICROCOMPUTER AND DESKTOP COMPUTER FACILITIES	All Insts.	Universities		Four-Year Colleges		Two-Year Colleges	
		Public	Private	Public	Private	Public	Private
Total number of institutionally-owned desktop computers used on campus today	962	5,186	3,280	1,136	334	581	91
Total number of institutionally-owned UNIX workstations on campus today	74	462	354	80	12	12	2
Percentage of inst-owned desktop computers/ workstations connected to campus network	62.5	77.1	78.0	68.8	60.5	57.5	55.9
Total number of personally-owned desktop computers used on campus today	430	2,840	1,970	388	220	52	69
Students per all desktop computers currently used on campus (Enrollment divided by reported total)	6.5	3.1	2.7	7.0	4.5	10.3	5.4
Students per institutionally-owned desktop computer or workstation (Enrollment divided by number of desktop computers)	8.1	4.9	4.2	8.6	6.3	11.5	8.9
Total number of computer labs_ clusters and classrooms on campus this term?	39	62	60	37	21	57	17
Total number of microcomputers in all the labs?	298	791	663	491	118	298	52
Total number of Unix workstations in all the labs?	35	140	118	81	5	7	1
Students per institutionally-owned computers available in labs or clusters (Enrollment divided by lab totals)	22.2	24.3	17.8	21.1	19.6	25.6	28.4
Ratio of desktop computers in labs/clusters to total number of institutionally-owned desktop computers	0.5	0.3	0.4	0.5	0.5	0.7	0.6
Proportion of students who have or own computers?	29.6	33.4	37.4	28.3	31.9	26.0	28.3
Proportion of faculty who have or own computers?	53.5	64.1	59.8	53.8	58.4	46.5	42.2
Proportion of administrators who have or own computers?	48.4	55.7	49.4	46.6	51.2	46.3	36.7
Proportion of students who have or own CD-ROMs?	19.6	17.0	22.1	15.6	20.8	20.8	18.9
Proportion of faculty who have or own CD-ROMs?	21.6	21.0	22.8	19.5	20.5	24.0	20.4
Proportion of administrators who have or own CD-ROMs?	17.8	16.8	21.2	15.6	15.0	21.6	19.5
Pct. of all campus computers in all campus labs & classrooms with CD-Roms	15.5	12.7	21.7	16.2	17.6	13.4	9.4
Est. desktop units purchased 1994-95:							
by students	244	1,161	759	261	116	130	41
by faculty	81	449	397	101	30	33	8
by administrators	65	383	391	57	28	23	8
by labs	79	281	178	96	37	76	19
Est. desktop units to be purchased in 1995-96:							
by students	291	1,210	922	318	142	218	42
by faculty	89	446	475	121	30	41	9
by administrators	71	440	416	55	29	31	8
by labs	94	287	230	149	36	85	19

Means by Campus Category

HARDWARE/SOFTWARE ACQUISITION POLICIES AND PROCEDURES	All Insts.	Universities Public	Universities Private	Four-Year Colleges Public	Four-Year Colleges Private	Two-Year Colleges Public	Two-Year Colleges Private
Does your campus have a special resale agreement with hardware vendors?							
No resale program	53.4	25.0	9.1	40.2	48.9	71.3	85.2
No but we sell computers on-campus	1.4	5.0	0.0	1.8	1.8	0.0	3.7
Campus bookstore	16.5	35.0	36.4	37.5	8.9	10.0	0.0
Campus center	16.1	27.5	50.0	11.6	23.1	7.2	0.0
Off-campus dealer	12.6	7.5	4.5	8.9	17.3	11.5	11.1
Are computer buyers required to purchase bundled software?	5.8	0.0	13.6	7.9	8.3	2.8	0.0
Are computer buyers encouraged to purchase software?	29.0	37.8	66.7	32.0	36.8	14.0	15.4
Does your campus have a special resale agreement with software vendors?							
No resale program	51.1	10.5	9.5	45.0	48.1	66.7	76.9
No but we sell software on-campus	3.9	5.3	4.8	0.9	7.9	1.5	0.0
Campus bookstore	24.6	47.4	47.6	38.7	19.0	17.7	11.5
Campus center	11.1	34.2	33.3	8.1	13.0	5.1	3.8
Off-campus dealer	9.2	2.6	4.8	7.2	12.0	9.1	7.7
Does your campus have a written policy on copyrighted software/piracy?							
No	14.0	5.6	10.0	8.5	16.7	12.2	44.0
Under development	18.8	16.7	5.0	16.0	19.2	22.3	16.0
Yes	67.2	77.8	85.0	75.5	64.1	65.4	40.0

Percentages by Campus Category

How would you rate the technology infrastructure at your institution?							
computer networks & data communication	32.3	47.5	36.4	30.5	31.1	26.0	18.5
telecommunications & phone system	29.3	52.5	36.4	39.7	25.5	23.9	23.1
video (cable into offices,classrooms,dorms)	12.9	2.6	18.2	18.0	9.9	15.5	7.6
overall infrastructure rating	24.3	33.0	31.8	32.1	22.3	20.2	20.0

Percentage rating "excellent" (scale score 6 or 7) by Campus Category
Scale from 1 "Poor" to 7 "Excellent"

ACADEMIC & INSTRUCTIONAL COMPUTING POLICIES & PROCEDURES	All Insts.	Universities		Four-Year Colleges		Two-Year Colleges	
		Public	Private	Public	Private	Public	Private
Does your campus have a formal plan for integrating computers in curriculum?	26.2	22.5	22.7	23.4	25.4	30.6	18.5
Does your campus have formal projects for developing instructional courseware?	32.1	57.5	50.0	35.7	27.2	32.4	3.7
Does your campus have support for faculty developing instructional courseware?	45.9	60.0	59.1	55.0	37.9	48.1	25.9
Does your campus provide support for faculty to develop research software?	25.3	32.5	31.8	40.0	22.0	21.4	7.4
Does your campus have a policy for rewarding courseware development?	13.5	17.9	27.3	14.0	10.3	15.0	7.4
Does your campus have a royalty-sharing program for faculty courseware?	12.7	63.2	27.3	16.7	2.7	12.1	0.0
Does your campus have a library of academic software for faculty evaluation?	24.1	22.5	22.7	28.6	23.7	24.2	11.1
Does your campus have an agreement for duplication/distribution of software?	71.4	92.5	86.4	79.5	71.6	65.2	38.5
Does your campus assist faculty moving applications to the desktop?	52.6	70.0	68.2	66.7	50.9	46.4	18.5
Does your campus have a formal plan for using Internet/WWW resources in							
instruction?	24.4	15.0	36.4	24.1	24.2	26.4	15.4
distance education?	12.5	20.0	9.1	18.9	7.6	14.8	0.0
off-campus promotion?	38.1	57.5	54.5	50.9	42.2	24.9	11.1

Percentages by Campus Category

COMPUTING FOR DISABLED STUDENTS	All Insts.	Universities		Four-Year Colleges		Two-Year Colleges	
		Public	Private	Public	Private	Public	Private
Organizational arrangments for providing computer access for disabled users							
Centralized, through main/dept computer centers	21.2	5.0	13.6	25.0	23.2	21.3	18.5
Segmented, through special office	12.5	15.0	18.2	13.4	4.5	20.3	7.4
Mixed, through special office/computer centers	25.3	60.0	31.8	34.8	11.2	30.4	7.4
General, no formal policy/procedures	41.0	20.0	36.4	26.8	61.2	28.0	66.7
Campus currently reviewing computing needs of disabled students?							
no, no plans to do so	48.7	39.5	57.1	40.0	60.7	37.7	74.1
no, recently completed review	23.5	31.6	14.3	25.5	16.9	30.7	11.1
yes, review now underway	20.5	26.3	23.8	27.3	14.2	24.6	3.7
yes, review planned for 1995-1996	7.3	2.6	4.8	7.3	8.2	7.0	11.1

Mean Importance by Campus Category
Scale from 1 "Not Important" to 7 "Very Important"

FUTURE ISSUES AFFECTING CAMPUS COMPUTING OVER NEXT 2-3 YEARS	All Insts.	Universities		Four-Year Colleges		Two-Year Colleges	
		Public	Private	Public	Private	Public	Private
Operating systems							
MS-DOS.	3.8	3.0	2.4	3.8	3.7	4.2	4.7
Windows 3.x	5.3	5.0	5.2	5.2	5.3	5.4	5.5
Windows/NT	4.5	4.9	4.2	4.8	4.4	4.4	4.7
Windows '95	5.4	6.0	5.3	5.5	5.4	5.4	4.8
OS/2 Warp	1.9	1.7	2.1	2.1	1.8	2.0	2.3
Macintosh.	4.5	5.1	5.8	4.9	4.8	3.8	2.6
Unix	4.5	5.9	5.3	5.0	4.6	3.9	3.1
NeXTStep	1.4	1.7	1.4	1.5	1.4	1.4	1.2
ScriptX	1.4	1.4	1.6	1.5	1.3	1.4	1.2
Solaris	2.2	3.9	3.3	2.6	2.0	1.7	1.5
Taligent	1.5	1.6	2.1	1.7	1.4	1.4	1.3
Hardware							
Palmtop computers	2.1	2.5	2.3	2.3	2.0	2.1	1.5
Handwriting-recognition PDAs	2.1	2.5	2.2	2.3	2.0	2.2	1.5
Notebook computers.	4.9	5.4	5.1	4.9	5.0	4.6	3.8
486-based CPUs	4.6	4.1	4.1	4.3	4.6	4.9	4.9
Pentium-based CPUs	6.1	6.0	5.7	6.1	6.1	6.2	5.0
Pentium Pro (P-6 /686)-based CPUs	4.8	5.5	4.7	4.8	4.6	4.8	3.9
Macintosh computers	4.6	5.3	5.5	5.0	4.9	3.9	2.7
Alpha (DEC)-based CPUs	2.9	3.8	3.5	3.7	3.0	2.3	1.5
PowerPC (Apple/IBM)	4.1	4.7	4.9	4.5	4.4	3.5	2.5
UNIX workstations	3.8	5.3	5.2	4.4	3.8	3.3	2.2
CD-ROM	6.0	6.0	5.5	6.0	6.1	6.0	5.8
PCMCIA cards	4.4	5.0	4.8	4.4	4.6	4.1	3.4
"Smart" cards	3.8	4.4	4.2	4.0	3.9	3.7	3.0
User support & service							
User support & training	6.4	6.4	6.4	6.5	6.4	6.3	6.1
Charging for previously free services	3.9	4.3	3.3	4.0	3.8	3.9	3.8
Upgrading aging hardware	6.2	6.0	6.0	6.0	6.2	6.3	5.9
Upgrading aging software.	6.1	6.0	5.9	6.0	6.2	6.3	5.8
Providing Internet/WWW training	6.2	6.2	5.9	6.1	6.2	6.2	5.9
Networking and groupware							
Local area networks	6.3	6.1	6.3	6.2	6.3	6.4	6.2
Campus-wide networks	6.5	6.8	6.8	6.5	6.5	6.5	5.9
Merging data/telecomm networks.	5.2	5.7	4.8	5.1	5.0	5.6	4.7
Connect PC-LANS to campus networks	5.9	6.3	5.5	6.0	5.7	6.2	5.0
Access to intercampus networks.	5.7	6.3	6.0	6.0	5.4	6.0	4.7
Electronic mail	6.4	6.7	6.5	6.5	6.5	6.4	5.7
Network fax	4.4	4.2	3.5	4.1	4.3	4.7	4.1
Internet resources.	6.0	6.4	6.0	6.1	6.0	6.0	5.6
Mosaic	4.0	4.2	4.0	4.3	3.7	4.1	3.1
Netscape	5.9	6.5	6.4	6.3	5.9	5.8	4.0
ATM	3.9	5.5	4.6	4.4	3.5	3.8	2.6
Lotus Notes	2.7	2.7	2.4	2.9	2.5	2.8	2.3

Mean Importance by Campus Category
Scale from 1 "Not Important" to 7 "Very Important"

FUTURE ISSUES AFFECTING CAMPUS COMPUTING OVER NEXT 2-3 YEARS	All Insts.	Universities		Four-Year Colleges		Two-Year Colleges	
		Public	Private	Public	Private	Public	Private
Resale and distribution							
Hardware resale contracts	3.2	4.0	4.7	3.3	3.5	2.7	2.2
Software resale contracts	3.2	4.5	5.2	3.2	3.4	2.8	2.2
Software site licensing	5.7	6.1	5.9	5.9	5.7	5.6	4.8
Instructional Applications and Resources							
Developing instructional software	4.1	5.1	4.8	4.3	4.0	4.1	2.6
Using instructional software in classes	5.8	5.8	6.0	5.7	5.7	5.9	5.4
Using instructional software as class supplement	5.9	5.8	5.9	5.8	5.9	6.0	5.7
Computer-based classroom presentation	6.0	6.3	6.0	5.9	6.0	6.0	5.1
Internet resources for instruction	6.0	6.2	6.0	5.9	6.0	6.0	5.4
CD-ROM libraries	5.9	5.6	5.4	5.7	5.9	6.0	6.0
WWW pages for classes	5.3	5.7	5.8	5.4	5.3	5.3	4.3

Mean Importance by Campus Category
Scale from 1 "Not Important" to 7 "Very Important"

ADDRESSING BUDGET ISSUES BY:	All Insts.	Universities		Four-Year Colleges		Two-Year Colleges	
		Public	Private	Public	Private	Public	Private
Reducing purchases of computer technology							
Doing already	19.4	5.6	18.2	23.1	16.4	19.2	50.0
Beginning 95-96	2.3	0.0	0.0	0.9	1.4	4.9	0.0
Reviewing for 95-96	10.8	11.1	0.0	9.3	8.4	15.3	11.5
Decided not to do	67.5	83.3	81.8	66.7	73.8	60.6	38.5
Charging fees to depts./service units							
Doing already	13.3	35.1	27.3	17.3	6.5	12.5	16.0
Beginning 95-96	2.3	2.7	0.0	2.7	0.9	4.0	0.0
Reviewing for 95-96	17.6	16.2	18.2	19.1	15.4	19.5	16.0
Decided not to do	66.8	45.9	54.5	60.9	77.1	64.0	68.0
Charging fees to individual users							
Doing already	20.0	30.6	27.3	21.7	18.3	17.3	26.9
Beginning 95-96	2.8	5.6	0.0	4.7	1.4	3.6	0.0
Reviewing for 95-96	20.9	16.7	18.2	18.9	20.7	22.4	26.9
Decided not to do	56.3	47.2	54.5	54.7	59.6	56.6	46.2
Requiring computer use fee for all students							
Doing already	26.9	47.5	13.6	44.0	16.7	26.0	23.1
Beginning 95-96	4.3	0.0	4.5	8.3	3.3	4.7	0.0
Reviewing for 95-96	22.9	20.0	9.1	17.4	23.8	26.0	30.8
Decided not to do	45.9	32.5	72.7	30.3	56.2	43.2	46.2
Exploring less expensive hardware options							
Doing already	64.4	73.0	59.1	69.7	64.2	60.8	64.0
Beginning 95-96	3.7	2.7	9.1	0.9	2.3	6.4	4.0
Reviewing for 95-96	15.8	13.5	9.1	13.8	18.8	15.7	8.0
Decided not to do	16.1	10.8	22.7	15.6	14.7	17.2	24.0
Exploring less expensive software options							
Doing already	65.1	73.0	63.6	70.4	64.5	62.4	58.3
Beginning 95-96	3.6	2.7	4.5	1.9	2.8	5.4	4.2
Reviewing for 95-96	14.4	16.2	13.6	13.0	16.1	14.1	4.2
Decided not to do	17.0	8.1	18.2	14.8	16.6	18.0	33.3
Leasing rather than buying hardware							
Doing already	11.7	11.4	28.6	10.2	12.9	8.5	20.0
Beginning 95-96	1.2	0.0	0.0	1.9	1.4	1.0	0.0
Reviewing for 95-96	19.1	25.7	9.5	19.4	21.0	17.6	12.0
Decided not to do	68.1	62.9	61.9	68.5	64.8	72.9	68.0

Percentages by Campus Category

CAMPUS COMPUTING 1995

ADDRESSING BUDGET ISSUES BY:	All Insts.	Universities Public	Universities Private	Four-Year Colleges Public	Four-Year Colleges Private	Two-Year Colleges Public	Two-Year Colleges Private
More active recycling of older equipment							
Doing already	84.0	89.2	72.7	86.9	85.6	82.0	75.0
Beginning 95-96	3.1	0.0	13.6	2.8	2.7	2.9	4.2
Reviewing for 95-96	6.5	5.4	4.5	6.5	5.4	7.8	8.3
Decided not to do	6.5	5.4	9.1	3.7	6.3	7.3	12.5
Consortial purchasing programs:							
Doing already	43.6	62.2	40.9	58.3	34.5	44.1	26.1
Beginning 95-96	1.7	0.0	0.0	1.0	1.5	2.1	8.7
Reviewing for 95-96	18.4	10.8	4.5	14.6	22.2	19.5	17.4
Decided not to do	36.4	27.0	54.5	26.2	41.9	34.4	47.8
Vendor Financing:							
Doing already	14.4	22.2	33.3	20.6	14.1	7.4	17.4
Beginning 95-96	1.2	0.0	4.8	0.0	1.5	1.1	4.3
Reviewing for 95-96	13.0	13.9	4.8	10.8	15.2	12.6	13.0
Decided not to do	71.4	63.9	57.1	68.6	69.2	78.9	65.2
Reducing hours in public access facilities							
Doing already	13.4	13.5	9.1	25.7	5.2	15.3	16.7
Beginning 95-96	0.8	0.0	4.5	0.0	0.5	1.0	4.2
Reviewing for 95-96	7.5	13.5	4.5	8.3	6.2	7.7	8.3
Decided not to do	78.3	73.0	81.8	66.1	88.2	76.0	70.8
Reducing services							
Doing already	20.1	27.0	4.5	29.6	14.8	19.5	33.3
Beginning 95-96	0.9	0.0	0.0	0.0	2.0	0.0	4.8
Reviewing for 95-96.	12.6	18.9	22.7	13.9	7.9	14.2	14.3
Decided not to do	66.4	54.1	72.7	56.5	75.4	66.3	47.6
Reorganizing operations							
Doing already	42.2	55.6	57.1	50.0	37.2	39.3	41.7
Beginning 95-96	7.3	8.3	9.5	6.5	6.3	9.2	0.0
Reviewing for 95-96	20.6	27.8	23.8	23.1	18.8	20.9	8.3
Decided not to do	29.9	8.3	9.5	20.4	37.7	30.6	50.0
Reducing staff							
Doing already.	20.3	13.5	22.7	29.6	12.5	21.3	45.8
Beginning 95-96	1.7	2.7	4.5	0.0	1.4	2.5	0.0
Reviewing for 95-96.	8.1	8.1	18.2	7.4	3.8	12.2	4.2
Decided not to do	70.0	75.7	54.5	63.0	82.2	64.0	50.0
Outsourcing academic computing operations							
Doing already.	2.1	0.0	0.0	1.0	2.9	2.1	4.3
Beginning 95-96	0.2	0.0	4.5	0.0	0.0	0.0	0.0
Reviewing for 95-96.	6.9	5.4	4.5	8.8	4.9	8.2	8.7
Decided not to do	90.9	94.6	90.9	90.2	92.2	89.7	87.0
Outsoursing administrative computing							
Doing already.	4.2	0.0	4.5	1.0	5.4	5.3	4.3
Beginning 95-96	0.5	0.0	0.0	1.0	0.0	1.1	0.0
Reviewing for 95-96.	8.0	13.9	9.1	12.6	3.9	8.4	8.7
Decided not to do	87.3	86.1	86.4	85.4	90.6	85.3	87.0
Using IT to reduce instructional costs							
Doing already.	31.2	33.3	33.3	38.6	21.9	38.3	14.3
Beginning 95-96	3.7	3.0	0.0	2.0	2.0	6.7	4.8
Reviewing for 95-96.	36.8	51.5	38.1	38.6	40.8	29.0	38.1
Decided not to do	28.2	12.1	28.6	20.8	35.3	25.9	42.9

Percentages by Campus Category

STRATEGIC PLANNING ISSUES OVER THE NEXT 2-3 YEARS	All Insts.	Universities		Four-Year Colleges		Two-Year Colleges	
		Public	Private	Public	Private	Public	Private
Assessing benefits of existing investments in computing resources	5.5	5.5	5.2	5.5	5.3	5.6	5.6
Clarifying goals and campus plans for technology resources	6.2	6.3	6.0	6.1	6.1	6.2	6.2
Providing rewards for faculty to support technology curriculum integration	4.7	5.3	4.5	4.9	4.6	4.7	4.3
Allocating campus funds to support expanded services	5.5	5.5	5.3	5.5	5.6	5.5	5.0
Faculty concerns about the benefits of computing in the curriculum	5.1	5.3	4.3	5.1	4.9	5.4	5.0
Administrative concerns about benefits of computing in the curriculum	4.9	4.9	4.5	4.8	4.8	5.2	5.3
Developing/strengthening vendor relationships	4.4	4.3	4.8	4.6	4.4	4.4	4.2
Charging fees to students for desktop computer access	3.9	4.4	2.5	4.0	3.6	4.2	4.0
Establishing/maintaining campus-wide standards for hardware	5.7	5.3	5.5	5.6	5.7	5.9	5.2
Establishing/maintaining campus-wide standards for software	5.7	5.3	5.7	5.7	5.7	5.9	5.3
Integrating computing services with allied service departments	5.4	5.4	5.1	5.3	5.5	5.3	5.6
Expanding computer networking across the campus	6.2	6.2	6.5	6.4	6.1	6.3	5.8
Operating a computer resale program for students and faculty	3.1	3.4	3.8	3.0	3.5	2.7	2.6
Developing budget mechanisms to replace aging equipment on a routine basis	5.8	5.8	5.0	5.7	5.8	6.0	5.9
Moving applications from mainframe to other/smaller platforms	4.4	5.2	4.9	4.7	4.3	4.3	3.0
Using Internet/WWW resources in instruction	5.7	5.8	5.6	5.8	5.7	5.8	5.2
Using technology-based commerical curriculum products	4.9	4.5	4.6	4.8	4.7	5.2	4.9
Using information tech resources to enhance our distance education program	4.9	5.8	4.0	5.3	4.0	5.8	3.4

Mean Importance by Campus Category
Scale from 1 "Not Important" to 7 "Very Important"

THIS YEAR'S COMPUTING BUDGET COMPARED TO LAST YEAR'S	All Insts.	Universities		Four-Year Colleges		Two-Year Colleges	
		Public	Private	Public	Private	Public	Private
Total academic computing budget:							
Reduced > 5%.	9.2	2.6	4.5	16.1	8.2	8.4	8.0
Reduced 3-5%.	4.0	0.0	4.5	3.6	1.4	8.4	0.0
Reduced 1-3%	6.6	10.3	9.1	11.6	3.7	6.9	0.0
No change.	30.8	38.5	31.8	27.7	29.2	31.0	44.0
Increased 1-3%	19.2	25.6	22.7	15.2	20.1	18.7	20.0
Increased 3-5%	11.0	10.3	4.5	9.8	11.0	11.8	16.0
Increased > 5%	19.2	12.8	22.7	16.1	26.5	14.8	12.0
Purchases of desktop computers by academic computing units:							
Reduced > 5%	9.2	0.0	4.5	10.7	8.6	10.9	12.0
Reduced 3-5%.	3.7	2.6	0.0	3.6	0.5	8.4	0.0
Reduced 1-3%	4.7	10.5	0.0	6.3	3.2	5.4	0.0
No change	31.8	34.2	31.8	36.6	23.6	35.1	52.0
Increased 1-3%	18.1	28.9	22.7	11.6	20.9	17.3	8.0
Increased 3-5%	12.6	13.2	13.6	10.7	17.7	8.4	8.0
Increased > 5%	19.9	10.5	27.3	20.5	25.5	14.4	20.0
All institutional purchases of desktop computers:							
Reduced > 5%	8.2	0.0	4.5	11.6	5.9	10.3	12.0
Reduced 3-5%.	2.9	0.0	0.0	1.8	0.9	6.9	0.0
Reduced 1-3%	5.8	10.5	0.0	6.3	3.7	7.9	4.0
No change.	28.4	39.5	36.4	36.6	22.8	26.6	32.0
Increased 1-3%	19.1	21.1	18.2	14.3	19.6	21.7	12.0
Increased 3-5%	16.0	21.1	13.6	10.7	20.1	13.3	20.0
Increased > 5%	19.5	7.9	27.3	18.8	26.9	13.3	20.0
Did your budget for academic computing experience a mid-year cut/recission?	11.6	12.8	5.3	16.5	10.7	10.6	8.7

Percentages by Campus Category

LIBRARIES AND COMPUTING	All Insts.	Universities		Four-Year Colleges		Two-Year Colleges	
		Public	Private	Public	Private	Public	Private
Does your campus have desktop computers in the library?	92.6	95.0	90.9	95.5	95.5	88.7	84.0
Library patrons use computers for:							
catalog access	77.0	85.0	86.4	87.5	75.1	74.6	48.1
database access.	66.9	77.5	81.8	72.3	69.3	62.2	33.3
word processing	54.3	50.0	50.0	59.8	54.7	52.2	55.6
CD ROM access	83.6	85.0	81.8	89.3	88.0	78.0	66.7
Network access	58.3	77.5	81.8	74.1	54.2	51.2	33.3
Gopher/Internet/WWW access	61.3	72.5	77.3	80.4	61.3	50.7	33.3
How does your library/library system provide access to bibliographic citation indexes?							
Print	54.2	55.0	36.4	56.3	57.8	51.2	51.9
Database on a campus CPU	36.1	60.0	50.0	42.0	32.4	33.0	18.5
CD-ROM	75.6	77.5	72.7	83.9	77.8	71.3	55.6
Other	8.3	17.5	13.6	8.0	10.7	4.3	3.7
Dial-up access/commercial data	32.3	47.5	40.9	47.3	36.9	19.1	3.7
Dial-up access/educational data	46.5	52.5	40.9	57.1	46.2	40.2	48.1

Percentages by Campus Category

NETWORKING	All Insts.	Universities		Four-Year Colleges		Two-Year Colleges	
		Public	Private	Public	Private	Public	Private
Connecting desktop systems to share departmental or workgroup files	5.4	5.4	5.6	5.3	5.4	5.4	5.3
Connecting desktop systems to share software resources	5.8	5.5	5.5	5.8	5.7	5.9	5.7
Supporting instructional labs and clusters	6.1	6.0	5.9	5.9	6.0	6.3	5.9
Intradepartmental mail systems on LANS	5.1	4.8	4.5	5.1	4.9	5.5	4.7
Campus-wide mail systems on a network	6.1	6.5	6.4	6.3	6.0	6.2	5.0
Linking PCs to larger computing systems	5.4	5.2	5.6	5.7	5.3	5.5	3.6
Linking PCs to campus library	5.7	5.9	5.9	5.8	5.8	5.6	5.3
Linking your campus with regional or national networks	5.8	6.3	6.5	6.1	5.7	5.7	5.0
Building a campus Gopher	3.8	3.2	3.4	3.9	3.6	4.0	3.6
Using Net Browsers for on-line resources	5.8	6.4	6.4	6.1	5.9	5.7	4.2
Creating WWW pages for dept use	5.5	6.1	6.3	5.8	5.5	5.2	4.0
Network printing	5.5	5.4	5.6	5.6	5.6	5.4	5.0

Mean Importance by Campus Category
Scale from 1 "Not Important" to 7 "Very Important"

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NETWORKING	All Insts.	Universities Public	Universities Private	Four-Year Colleges Public	Four-Year Colleges Private	Two-Year Colleges Public	Two-Year Colleges Private
Are network issues more or less important than last year?							
More important	78.1	77.5	81.8	73.6	80.4	79.3	64.0
Less important	0.6	2.5	0.0	0.9	0.4	0.0	4.0
About the same	21.3	20.0	18.2	25.5	19.1	20.7	32.0
Does your campus have a campus-wide network backbone?	75.6	100.0	100.0	92.8	67.1	72.0	44.0
What is the primary medium for your campus backbone?							
Fiber	74.7	87.2	95.5	78.8	80.1	61.2	61.5
ISDN	0.4	0.0	0.0	0.0	0.6	0.7	0.0
Ethernet/Coax	17.3	7.7	4.5	17.3	13.5	25.0	23.1
Twisted Pair.	6.8	5.1	0.0	3.8	5.1	11.8	7.7
Other	0.8	0.0	0.0	0.0	0.6	1.3	7.7
What facilities/departments on your campus have access to the campus backbone?							
Central administration	71.8	95.0	95.5	88.4	63.6	69.4	37.0
Student services	67.6	87.5	100.0	77.7	60.0	66.5	40.7
Development	58.9	87.5	90.9	73.2	56.4	48.3	33.3
Budget/Financial offices	68.8	90.0	90.9	85.7	60.0	66.5	40.7
Public access computer labs	56.5	85.0	100.0	78.6	56.9	38.8	22.2
Departmental computer labs	58.6	92.5	95.5	83.9	48.4	50.2	22.2
Student dormatories	25.0	60.0	45.5	39.3	28.0	7.7	7.4
Bookstore	41.4	60.0	50.0	49.1	36.0	42.1	14.8
Biological & physical sciences	60.2	92.5	95.5	83.9	51.1	52.2	22.2
Business	58.6	92.5	95.5	80.4	45.8	55.5	18.5
Education	53.7	92.5	90.9	76.8	46.7	42.1	18.5
Engineering	39.8	80.0	90.9	58.9	24.0	38.3	3.7
Fine & performing arts	47.9	87.5	77.3	67.9	39.6	39.2	18.5
Humanities	55.0	90.0	90.9	70.5	47.1	48.3	25.9
Social science	55.7	92.5	95.5	74.1	48.4	47.4	18.5
Main library/library system	68.0	95.0	95.5	88.4	60.0	61.7	37.0
Does campus have access to the Internet?	89.7	100.0	95.5	100.0	86.9	87.8	64.0
Who has access to Internet?							
Undergraduate students	60.0	87.5	77.3	78.6	67.1	39.2	29.6
Graduate students	32.0	85.0	77.3	64.3	33.8	1.9	0.0
Faculty	76.1	87.5	77.3	86.6	76.4	72.2	40.7
Administrators	76.4	87.5	77.3	84.8	74.7	75.1	48.1
Staff	71.5	87.5	72.7	84.8	69.8	67.9	33.3
Does campus charge fees for Internet access?	4.6	0.0	4.5	3.6	6.2	4.3	6.3
Who is charged for E-mail/Internet access?							
Undergraduate students	4.1	0.0	4.5	4.5	5.3	3.3	3.7
Graduate students	1.9	0.0	4.5	3.6	3.1	0.0	0.0
Faculty	2.2	0.0	0.0	1.8	2.7	2.4	3.7
Administrators	2.5	0.0	0.0	1.8	3.1	2.9	3.7
Staff	1.7	0.0	0.0	2.7	2.2	1.0	3.7
Do you have a campus gopher?							
no	55.4	12.5	27.3	36.9	65.3	67.6	64.7
planning one for 1995-96	13.1	7.5	0.0	12.6	7.7	20.2	29.4
yes	31.5	80.0	72.7	50.5	27.0	12.2	5.9
Do you have a WWW Page?							
no	19.0	0.0	0.0	7.1	16.5	32.6	47.1
planning one for 1995-96	25.8	2.5	4.5	15.2	27.5	35.8	47.1
yes	55.2	97.5	95.5	77.7	56.0	31.6	5.9

Percentages by Campus Category

ORGANIZATION OF CAMPUS COMPUTING AND TECHNOLOGY UNITS	All Insts.	Universities		Four-Year Colleges		Two-Year Colleges	
		Public	Private	Public	Private	Public	Private
Campus is part of a multicampus system with shared computing resources	33.7	43.6	18.2	44.6	12.5	53.4	11.5
Academic and administrative computing on my campus are:							
Separate units	53.6	42.5	50.0	36.6	53.6	62.8	73.1
A single unit	46.4	57.5	50.0	63.4	46.4	37.2	26.9
Campus computing reorganized in the past two years							
Academic computing	37.0	48.7	38.1	39.6	32.9	37.1	42.3
Administrative computing	36.4	41.0	30.0	37.3	32.4	38.0	52.2
Anticipate reorganization of campus computing in next two years							
Academic computing	39.0	51.3	40.0	41.3	37.1	35.3	53.8
Administrative computing	36.9	42.1	31.6	37.4	33.5	37.8	52.0
Head of computing unit reports to:							
Academic computing							
President	10.2	2.6	4.5	9.9	5.6	16.9	12.5
Provost	38.0	39.5	27.3	39.6	49.7	28.2	20.8
Vice president	26.9	52.6	59.1	42.6	23.4	14.9	16.7
Dean	25.0	5.3	9.1	7.9	21.3	40.0	50.0
Administrative computing							
President	18.0	2.6	5.3	9.9	15.0	26.9	37.5
Provost	16.1	13.2	21.1	20.8	20.5	10.0	12.5
Vice president	52.7	78.9	73.7	62.4	57.0	37.3	45.8
Dean	13.2	5.3	0.0	6.9	7.5	25.9	4.2
Level of involvement of our chief academic officer in instructional technology							
Not interested-involved	4.6	5.0	0.0	5.4	5.5	2.9	11.5
Interested	22.1	20.0	31.8	18.8	24.1	19.5	34.6
Somewhat involved	31.2	35.0	45.5	35.7	29.1	30.2	19.2
Directly involved	42.1	40.0	22.7	40.2	41.4	47.3	34.6
How does your campus deal with the "life cycle" issues of desktop computing?							
One-time allocation	36.4	38.5	50.0	44.0	30.8	35.7	42.3
Developing plan.	41.7	35.9	18.2	37.6	49.8	37.7	50.0
Have Plan	22.0	25.6	31.8	18.3	19.5	26.6	7.7

Percentages by Campus Category

PREPARATION FOR USE OF COMPUTERS IN INSTRUCTION & SCHOLARSHIP	All Insts.	Universities		Four-Year Colleges		Two-Year Colleges	
		Public	Private	Public	Private	Public	Private
How well does institution prepare students for technology skills over next decade?							
in biological & physical sciences?	3.4	3.8	3.9	3.6	3.5	3.2	2.6
in business?	3.8	4.0	4.1	3.8	3.6	3.9	3.8
in education?	3.2	3.5	3.5	3.3	3.2	3.1	3.1
in engineering?	3.6	4.4	4.4	3.7	3.2	3.6	2.8
in fine & performing arts?	3.0	3.0	3.3	3.0	3.0	2.9	2.8
in humanities?.	3.0	3.3	3.2	3.0	3.0	3.0	2.9
in social science?	3.2	3.4	3.6	3.2	3.3	3.0	2.7
Faculty preparation for instruction in:							
in biological & physical sciences?	3.4	3.5	3.5	3.5	3.6	3.3	2.7
in business?	3.6	3.7	3.8	3.5	3.4	3.7	3.9
in education?	3.0	3.3	3.3	3.2	3.0	2.8	2.8
in engineering?	3.5	4.1	4.2	3.5	3.3	3.6	2.9
in fine & performing arts?	2.8	2.9	2.9	2.9	2.8	2.8	2.8
in humanities?.	2.8	3.0	2.9	2.8	2.7	2.8	2.7
in social science?	3.0	3.0	3.4	3.0	3.0	2.8	2.6
Faculty preparation for scholarship in:							
in biological & physical sciences?	3.3	4.0	4.1	3.5	3.6	2.8	2.3
in business?	3.2	3.9	3.7	3.5	3.1	2.9	2.7
in education?	2.8	3.4	3.5	3.0	2.9	2.5	2.2
in engineering?	3.2	4.4	4.2	3.3	3.0	2.9	2.1
in fine & performing arts?	2.6	2.9	2.7	2.7	2.7	2.5	2.0
in humanities?.	2.7	3.1	3.0	2.7	2.7	2.5	2.1
in social science?	2.9	3.5	3.5	3.1	3.0	2.6	1.9
Faculty preparation in Internet/WWW							
in biological & physical sciences?	2.9	3.5	3.3	3.2	3.1	2.5	2.0
in business?	2.9	3.4	3.3	3.2	2.8	2.7	2.3
in education?	2.6	3.1	3.5	2.9	2.7	2.3	2.0
in engineering?	2.9	3.8	3.5	3.1	2.7	2.7	1.6
in fine & performing arts?	2.4	2.6	2.7	2.6	2.4	2.3	1.7
in humanities?.	2.5	2.9	2.9	2.7	2.5	2.3	1.8
in social science?	2.6	3.0	3.0	2.9	2.6	2.3	1.8

Mean Preparation by Campus Category
Scale from 1 "Poor" to 5 "Excellent"

Percentage of courses using IT Resources							
Computer-based labs/classrooms	23.7	22.5	24.2	21.8	18.8	29.9	24.3
Computer-based simulations/exercises	14.4	13.5	20.4	13.4	11.8	17.2	14.0
Presentation handouts	25.7	34.6	21.4	26.2	24.5	26.2	20.4
CD-Rom-based materials	8.2	6.5	7.3	9.0	8.5	8.1	6.7
Electronic Mail	20.1	29.7	34.8	28.2	21.1	12.6	8.7
Commercial courseware	18.4	14.2	11.5	18.9	12.8	25.4	20.4
Interactive data analysis & display	8.1	10.0	8.6	10.5	7.3	7.9	3.4
Multimedia	8.5	9.1	11.4	11.0	6.8	8.9	6.1
Internet resources (from off-campus sources)	10.9	19.6	10.8	16.4	11.0	6.9	5.4
WWW pages for materials/resources	6.2	9.1	8.3	10.5	4.9	4.9	2.5

Percentages by Campus Category

EFFECTS OF COMPUTER TECHNOLOGY	All Insts.	Universities		Four-Year Colleges		Two-Year Colleges	
		Public	Private	Public	Private	Public	Private
Faculty believe technology can enhance classes and learning							
Strongly Disagree	1.1	2.6	0.0	1.8	0.9	0.5	4.0
Disagree	13.2	12.8	23.8	15.6	13.5	10.6	12.0
Agree	69.8	74.4	61.9	70.6	70.7	68.6	68.0
Strongly Agree	15.9	10.3	14.3	11.9	14.9	20.3	16.0
Faculty have unreasonable expectations about user support services							
Strongly Disagree	3.2	0.0	0.0	0.9	4.5	3.4	8.0
Disagree	38.3	30.8	19.0	39.8	39.1	38.8	48.0
Agree	38.8	38.5	66.7	34.3	42.3	36.9	20.0
Strongly Agree	19.7	30.8	14.3	25.0	14.1	20.9	24.0
My president has questions about costs of computing support							
Strongly Disagree	18.1	20.0	13.6	16.7	17.9	19.5	16.0
Disagree	47.9	45.0	45.5	50.9	50.9	46.3	28.0
Agree	25.4	30.0	31.8	24.1	22.9	25.4	40.0
Strongly Agree	8.6	5.0	9.1	8.3	8.3	8.8	16.0
Technology has enhanced instruction, not productivity of faculty							
Strongly Disagree	4.2	5.0	4.5	2.8	4.5	3.4	12.0
Disagree	25.9	32.5	50.0	26.6	28.6	17.5	36.0
Agree	56.8	57.5	40.9	56.0	57.3	59.2	48.0
Strongly Agree	13.2	5.0	4.5	14.7	9.5	19.9	4.0
CD-ROMs will be an important source for content/instruct. resources over next 2-3 years							
Strongly Disagree	1.3	5.3	4.5	0.0	0.0	1.4	8.0
Disagree	13.4	13.2	40.9	13.9	13.1	11.1	8.0
Agree	57.6	63.2	40.9	64.8	59.7	53.1	52.0
Strongly Agree	27.7	18.4	13.6	21.3	27.1	34.3	32.0
Internet/WWW will be an important source for content/instruct. resources over next 2-3 years							
Strongly Disagree	1.3	0.0	0.0	0.0	1.4	1.5	8.0
Disagree	5.2	2.6	13.6	3.7	1.8	8.7	8.0
Agree	50.7	48.7	50.0	51.9	51.1	51.0	44.0
Strongly Agree	42.8	48.7	36.4	44.4	45.7	38.8	40.0

Percentages by Campus Category

APPENDIX A — SURVEY METHODOLOGY

The 1994 National Survey of Desktop Computing in Higher Education was designed to collect information about campus planning, policies, and procedures affecting the use of desktop computers (i.e., personal computers and workstations) from colleges and universities in the United States (including Alaska and Hawaii).

The 1995 survey was mailed to a representative sample of some 1,500 two- and four-year US colleges and universities in August, 1995. The sampling design focused on two- and four-year colleges and universities, omitting small branch campuses of multi-campus districts and some very small enrollment (under 200 student) private two- and four-year colleges. Proprietary schools were also omitted from the survey sample.

Questionnaires were mailed to the institution's chief academic computing officer. In those instances where it was not possible to identify, by name, and individual responsible for academic or administrative computing, the survey was mailed to the chief academic officer of the institution.

A second wave of surveys were mailed to non-responding institutions late in September, 1995. A total of 645 institutions returned completed and usable questionnaires by December 15, 1995, the closing date for data analysis. The number of colleges and universities participating in the 1995 survey, by type of institution, are shown below.

Public Research Universities	42
Private Research Universities	26
Public Four-Year Colleges	114
Private Four-Year Colleges	227
Public Two-Year Colleges	209
Private Two-Year Colleges	27

Appendix B — 1995 Questionnaire

CAMPUS COMPUTING, 1995

THE NATIONAL SURVEY OF DESKTOP COMPUTER USE IN HIGHER EDUCATION

Dear Colleague:

This is the sixth annual survey on desktop computing. It is part of a national project focused on campus policies, plans, and procedures affecting academic computing in two- and four-year colleges and universities. Your responses will contribute to a better understanding of the ways campuses across the country are planning for and using information technology.

Please take a few minutes to complete this questionnaire. All responses will be treated in a confidential manner.

Kenneth C. Green
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The Claremont Graduate School
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(818) 990-2212 cgreen@earthlink.net

MAILING LABEL

Please attach a business card with the correct name, title, and address of survey respondent. Updated addresses will be used to send you a copy of the survey results.

Please respond to all questions based on institutional policies, i.e., policies that apply broadly to students, faculty, administrators and staff in all units of your institution.

A. GENERAL CAMPUS POLICIES ABOUT DESKTOP COMPUTING

1. Does your campus have a formal policy promoting or mandating computers/computing resources for
   curriculum utilization? ① no ② yes
   undergraduates? ① no ② yes
   graduate students? ① no ② yes

2. Does your institution have a *computer instruction* or *computer competency* requirement for all undergraduates?
   ① no ② yes

3. Does your institution have a special computer use fee or annual/term computer use charge for all students?
   ① no ② yes

4. Does your campus have a formal policy about the *confidentiality of computer data?*
   ① no ② yes

5. Does your campus have a formal policy regarding the *development of software* by faculty and staff?
   ① no ② yes

6. Please check the *Operating Systems/Interfaces* recommended or supported by your institution:
   ❑ Macintosh ❑ MS-DOS ❑ OS/2 Warp
   ❑ UNIX ❑ Windows 3.x
   ❑ Solaris ❑ Windows NT ❑ None (My campus does not recommend a specific operating system or interface.)
   ❑ Windows '95

7. Does your institution *require* or *strongly recommend* microcomputer ownership? *(please check all that apply)*
   ❑ no
   ❑ yes, for students in specific disciplines or programs
   ❑ yes, for students in individual academic units or schools
   ❑ yes, for all students

8. Does your institution (or individual units or programs) specifically recommend a particular brand or products for
   students? ① no ② yes
   faculty? ① no ② yes
   administrators/staff? ① no ② yes

   If you answered "yes" to any part of #8 please go on to #9; otherwise, please go on to #10.

9. Please check the brand(s)/kinds(s) of *desktop* computer system(s) generally recommended by your institution:

Apple/Macintosh	Intel•Windows•OS/2 Compatibles	UNIX Systems	
❑ 68000-based systems	❑ '486 systems	❑ DEC	❑ IBM
❑ Power PC systems	❑ Pentium systems	❑ HP	❑ Sun
❑ Notebook computers	❑ Power PC systems	❑ Other? _____	
	❑ Notebook computers		

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please go on to the next page ➨

B. Hardware and Software Acquisition Policies and Procedures

10. Does your institution have a special pricing or resale agreement with one or more *hardware* vendors?
    ① no, we do not have any kind of computer resale program.
    ② no, we do not have a special discount program although we do sell computers through an on-campus facility.
    ③ yes, for hardware sold through the campus bookstore.
    ④ yes, for hardware sold through a special campus center or outlet *not* affiliated with our bookstore.
    ⑤ yes, for hardware sold by special agreement with an off-campus dealer.
11. Does your institution *require* computer buyers to purchase software as part of the resale program?
    ① no ② yes
12. Does your institution *encourage* computer buyers to purchase software as part of the resale program?
    ① no ② yes
13. Does your institution have a special pricing or resale agreement with one or more *software* vendors?
    ① no, we do not have a software resale program.
    ② no, we do not have a special discount program although we do sell software through an on-campus facility.
    ③ yes, for software sold through the campus bookstore.
    ④ yes, for software sold through a special campus center or outlet *not* affiliated with our bookstore.
    ⑤ yes, for software sold by special agreement with an off-campus dealer.
14. Does your institution have a written policy regarding the *duplication of copyrighted software/software piracy?*
    ① no ② no, but under development ③ yes (effective date: _____)

C. Academic & Instructional Computing Policies and Procedures

15. Does your campus have a formal plan for integrating desktop computers into the curriculum?
    ① no ② yes
16. Does your campus have one or more formal projects for developing desktop instructional software/courseware?
    ① no ② yes
17. Does your campus provide any formal support or assistance (e.g., funding, release time, technical assistance) to help faculty who wish to develop *instructional* software/courseware?
    ① no ② yes
18. Does your campus provide any formal support or assistance (e.g., funding, release time, technical assistance) to assist faculty who may wish to develop software to assist their *research*?
    ① no ② yes
19. Does your campus have a policy or program for rewarding courseware development or providing incentives for faculty to develop instructional software/courseware?
    ① no ② yes
20. Does your campus have a royalty-sharing program for faculty who develop instructional software/courseware using campus resources and/or staff?
    ① no ② yes
21. Does your campus maintain a library of academic courseware for faculty review and evaluation?
    ① no ② yes
22. Does your campus have one or more agreements or licenses for on-campus duplication and distribution of desktop computer software products?
    ① no ② yes
23. Does your campus provide assistance to faculty moving applications from mainframe to desktop computers or workstations?
    ① no ② yes
24. Does your campus have a formal plan for using the Internet and WWW resources in instruction?
    ① no ② yes
25. Does your campus have a formal plan for using the Internet and WWW resources in distance education?
    ① no ② yes
26. Does your campus have a formal plan for using the Internet and WWW to promote itself to off-campus audiences (e.g., alumi, prospective students)?
    ① no ② yes

please go on to the next page ➨

D. COMPUTING FOR DISABLED STUDENTS

27. How would you describe the organizational arrangements for providing computer access for disabled end-users?
    - ① *centralized* access, through main and/or departmental computer centers.
    - ② *segmented* access, through a special office specifically charged to assist disabled end-users.
    - ③ *mixed* access, through both a special office and also through main and/or departmental computer centers.
    - ④ *general access*, with no formal policy or procedure(s) for specifically serving disabled students.

28. Is your campus currently reviewing the computing needs of disabled students?
    - ① no, and we have no plans to do so in the next year or so.
    - ② no, because we recently completed this type of review.
    - ③ yes, a review is now underway.
    - ④ yes, a review is planned for the coming academic year (1995-1996).

E. FUTURE ISSUES AFFECTING CAMPUS COMPUTING

29. As you think about the future of computing at your institution, please indicate how *important* you see the following items in the overall campus computing environment and computing policy over the next 2-3 years.

	Not Important						*Very Important*
Operating System/Interface/Development							
MS-DOS	①	②	③	④	⑤	⑥	⑦
Windows 3.x	①	②	③	④	⑤	⑥	⑦
Windows/NT	①	②	③	④	⑤	⑥	⑦
Windows '95	①	②	③	④	⑤	⑥	⑦
OS/2 Warp	①	②	③	④	⑤	⑥	⑦
Macintosh	①	②	③	④	⑤	⑥	⑦
UNIX	①	②	③	④	⑤	⑥	⑦
NeXTStep	①	②	③	④	⑤	⑥	⑦
ScriptX	①	②	③	④	⑤	⑥	⑦
Solaris	①	②	③	④	⑤	⑥	⑦
Taligent	①	②	③	④	⑤	⑥	⑦
Hardware							
Palmtop computers	①	②	③	④	⑤	⑥	⑦
Handwriting-recognition PDAs	①	②	③	④	⑤	⑥	⑦
Notebook computers	①	②	③	④	⑤	⑥	⑦
'486-based CPUs	①	②	③	④	⑤	⑥	⑦
Pentium-based CPUs	①	②	③	④	⑤	⑥	⑦
P-6 ('686) based CPUs	①	②	③	④	⑤	⑥	⑦
Macintosh computers	①	②	③	④	⑤	⑥	⑦
Alpha (DEC)-based CPUs	①	②	③	④	⑤	⑥	⑦
PowerPC (Apple/IBM)	①	②	③	④	⑤	⑥	⑦
UNIX Workstations	①	②	③	④	⑤	⑥	⑦
CD-ROM	①	②	③	④	⑤	⑥	⑦
PCMCIA Cards	①	②	③	④	⑤	⑥	⑦
"Smart" Cards	①	②	③	④	⑤	⑥	⑦
User Support & Service							
User support & training	①	②	③	④	⑤	⑥	⑦
Charging users for services now provided at little or no cost	①	②	③	④	⑤	⑥	⑦
Upgrading aging hardware	①	②	③	④	⑤	⑥	⑦
Upgrading aging software	①	②	③	④	⑤	⑥	⑦
Providing Internet/WWW training	①	②	③	④	⑤	⑥	⑦

	Not Important						*Very Important*
Networking & GroupWare							
Local area networks (LANS)	①	②	③	④	⑤	⑥	⑦
Campus-wide networks	①	②	③	④	⑤	⑥	⑦
Merging data & telecommunication networks	①	②	③	④	⑤	⑥	⑦
Connecting PC-LANS to campus-wide networks	①	②	③	④	⑤	⑥	⑦
Access to intercampus networks	①	②	③	④	⑤	⑥	⑦
Electronic mail	①	②	③	④	⑤	⑥	⑦
Network fax	①	②	③	④	⑤	⑥	⑦
Internet resources (Gopher, Listserv, etc.)	①	②	③	④	⑤	⑥	⑦
Mosaic	①	②	③	④	⑤	⑥	⑦
Netscape	①	②	③	④	⑤	⑥	⑦
ATM	①	②	③	④	⑤	⑥	⑦
Lotus Notes	①	②	③	④	⑤	⑥	⑦
Resale and Distribution							
Hardware resale contracts	①	②	③	④	⑤	⑥	⑦
Software resale contracts	①	②	③	④	⑤	⑥	⑦
Software site licensing	①	②	③	④	⑤	⑥	⑦
Instructional Applications and Resources							
Developing instructional software	①	②	③	④	⑤	⑥	⑦
Using instructional software in classes	①	②	③	④	⑤	⑥	⑦
Using instructional software as a supplement to classes	①	②	③	④	⑤	⑥	⑦
Computer-based classroom presentation facilities	①	②	③	④	⑤	⑥	⑦
Internet resources for instruction	①	②	③	④	⑤	⑥	⑦
CD-ROM Libraries	①	②	③	④	⑤	⑥	⑦
WWW pages for classes	①	②	③	④	⑤	⑥	⑦

30. How would you rate the "technology infrastructure" at your institution?

	poor						*excellent*
computer networks and data communication	①	②	③	④	⑤	⑥	⑦
telecommunications and phone system?	①	②	③	④	⑤	⑥	⑦
video (cable into offices, classrooms, and dorms)	①	②	③	④	⑤	⑥	⑦
overall assessment of the campus technology infrastructure	①	②	③	④	⑤	⑥	⑦

please go on to the next page ➨

31. Many campuses find themselves facing declining enrollments, reduced financial resources, and increasing costs. How is your campus addressing these issues as you view technology needs and services??

	Doing This Already	*Beginning in '95-'96 Year*	*Reviewing For '95-'96 Year*	*Decided Not To Do This*
Reducing purchases of computer technology	①	②	③	④
Charging fees to depts. and service units (e.g., networking, printing)	①	②	③	④
Charging fees to individual users (e.g., access, printing)	①	②	③	④
Requiring a computer use fee for all students	①	②	③	④
Exploring less expensive hardware options	①	②	③	④
Exploring less expensive software options	①	②	③	④
Leasing rather than buying hardware	①	②	③	④
More active recycling of older equipment to other departments and units	①	②	③	④
Consortial purchasing programs	①	②	③	④
Vendor financing	①	②	③	④
Reducing hours in public access facilities	①	②	③	④
Reducing services (e.g., less consulting)	①	②	③	④
Reorganizing operations (e.g., combining units to coordinate staffing)	①	②	③	④
Reducing staff	①	②	③	④
Outsourcing academic computing	①	②	③	④
Outsourcing administrative computing	①	②	③	④
Using Information Technology to to reduce instructional costs	①	②	③	④

F. Strategic and Budget Issues

32. As you look at the future of computing on your campus, please indicate how important the following computing/technology issues will be in the overall campus computing environment over the next 2-3 years.

	Not Important						*Very Important*
Assessing the benefits of existing investments in computing and technology resources	①	②	③	④	⑤	⑥	⑦
Clarifying goals and campus plans for technology resources	①	②	③	④	⑤	⑥	⑦
Providing incentives and rewards for faculty to support technology integration into the curriculum	①	②	③	④	⑤	⑥	⑦
Allocating campus funds to support expanded services	①	②	③	④	⑤	⑥	⑦
Faculty concerns about the benefits of computing in the curriculum	①	②	③	④	⑤	⑥	⑦
Administrative concerns about the benefits of computing in the curriculum	①	②	③	④	⑤	⑥	⑦
Developing/strengthening vendor relationships	①	②	③	④	⑤	⑥	⑦
Charging fees to students for desktop computer access	①	②	③	④	⑤	⑥	⑦
Establishing/maintaining campus-wide standards for *hardware*	①	②	③	④	⑤	⑥	⑦
Establishing/maintaining campus-wide standards for *software*	①	②	③	④	⑤	⑥	⑦
Integrating computing services with allied service departments (for example, library services)	①	②	③	④	⑤	⑥	⑦
Expanding computer networking across the campus	①	②	③	④	⑤	⑥	⑦
Operating a computer resale program for students and faculty	①	②	③	④	⑤	⑥	⑦
Developing budget mechanisms to replace aging equipment on a routine basis	①	②	③	④	⑤	⑥	⑦
Moving applications from mainframe to other/smaller platforms (workstations, PCs, etc.)	①	②	③	④	⑤	⑥	⑦
Using Internet/WWW resources in instruction	①	②	③	④	⑤	⑥	⑦
Using technology-based commerical curriculum products	①	②	③	④	⑤	⑥	⑦
Using info. technology resources to enhance our distance ed. program	①	②	③	④	⑤	⑥	⑦

please go on to the next page ➨

33. Compared to last year (1994-95), how do you expect this year's budget (1995-96) to change with regard to academic computing overall, and to academic computing and institutional purchases of desktop computers?

	Reduced ≥ 5%	*Reduced 3-5%*	*Reduced 1-3%*	*No Change*	*Increased 1-3%*	*Increased 3-5%*	*Increased >5%*
Total academic computing budget	①	②	③	④	⑤	⑥	⑦
Purchases of desktop computers by academic computing units	①	②	③	④	⑤	⑥	⑦
All institutional purchases of desktop computers	①	②	③	④	⑤	⑥	⑦

34. Did your budget for academic computing experience a mid-year cut or recission during 1994-1995?
① no ② yes If yes, by what percentage? |__|__|%

G. Libraries and Computing

35. Does your campus have desktop computers in the library?
① no (skip to next question #37) ② yes (go on to question below)
If yes, how do library users make use of these computers (please check all that apply):
❑ catalog access ❑ word processing ❑ network access
❑ database access ❑ CD ROM access ❑ Gopher/Internet/WWW access

36. How does your library/library system provide access to bibliographic citation indexes?
❑ print
❑ database on a campus CPU
❑ CD ROM
❑ other: _____
❑ dial-up access to off-campus *commercial* databases
❑ dial-up access to off-campus *educational* databases

H. Networking

37. How important are the following issues in discussions about and planning for networking on your campus?

	Not Important						*Very Important*
Connecting desktop systems to share departmental or workgroup files	①	②	③	④	⑤	⑥	⑦
Connecting desktop systems to share software resources	①	②	③	④	⑤	⑥	⑦
Supporting instructional labs and clusters	①	②	③	④	⑤	⑥	⑦
*Intra*departmental mail systems on LANS	①	②	③	④	⑤	⑥	⑦
Campus-wide mail systems on a network	①	②	③	④	⑤	⑥	⑦
Linking PCs to larger computing systems	①	②	③	④	⑤	⑥	⑦
Linking PCs to your library system	①	②	③	④	⑤	⑥	⑦
Linking your campus with regional or national networks	①	②	③	④	⑤	⑥	⑦
Building a campus Gopher	①	②	③	④	⑤	⑥	⑦
Using Net Browers (e.g., Netscape) for on-line resource access	①	②	③	④	⑤	⑥	⑦
Creating WWW pages for department use and course resources	①	②	③	④	⑤	⑥	⑦
Network printing	①	②	③	④	⑤	⑥	⑦

38. Would you say that network issues are more or less important than last year, or about the same?
① More important ② Less important ③ About the same

39. Does your campus have a campus-wide network backbone?
① no (go on to question #42) ② yes

40. What is the primary medium for your campus backbone?
① Fiber ③ Ethernet/Coax ⑤ Other: _____
② ISDN ④ Twisted Pair

41. What facilities and departments on your campus have access to the campus backbone?

Offices/Labs/Facilities
❑ Central Administration
❑ Student Services
❑ Development
❑ Budget/Financial offices
❑ Public Access Computer Labs
❑ Departmental Computer Labs
❑ Student Dormatories
❑ Campus Bookstore

Academic Departments/Units
❑ Biological & Physical Sciences
❑ Business
❑ Education
❑ Engineering
❑ Fine & Performing Arts
❑ Humanities
❑ Social Science
❑ Main Library/Library system

please go on to the next page ➥

42. Does your campus have access to the Internet? ① no (skip to # 48) ② yes
43. Who has *individual* access to the Internet at your campus? (Please check all that apply and indicate your estimate of the percentage of each of these groups with individual access or accounts)
    - ❑ Undergraduate Students — percent of undergraduates? |__|__| %
    - ❑ Graduate Students — percent of graduate students |__|__| %
    - ❑ Faculty — percent of faculty |__|__| %
    - ❑ Administrators — percent of administrators |__|__| %
    - ❑ Staff — percent of staff |__|__| %
44. Does your campus charge fees for Internet access?
    ① no (skip to #46) ② yes
45. Which users are assessed a fee for using E-mail and Internet access?
    ❑ Undergraduate students ❑ Faculty ❑ Staff
    ❑ Graduate students ❑ Administrators
46. Do you have a campus gopher?
    ① No ② No, but we are planning one for this year (1995-96) ③ Yes
47. Does your campus have a WWW home page?
    ① No ② No, but we are planning one for this year (1995-96) ③ Yes

I. VENDOR ASSESSMENT

48. What is your assessment of the companies that sell desktop (i.e., personal computer and workstation) systems and software to the higher education market?

Ratings: ① Strongly Disagree (SD) ② Disagree ③ Agree ④ Strongly Agree (SA)

	Has Appropriate Products for Campus Users				*Understands Computing Issues Affecting My Campus*				*Will Play an Important Role in our Computing Plans for the Next 2-3 Years*			
	SD	D	A	SA	SD	D	A	SA	SD	D	A	SA
Hardware Vendors												
Apple	①	②	③	④	①	②	③	④	①	②	③	④
AT&T	①	②	③	④	①	②	③	④	①	②	③	④
Compaq	①	②	③	④	①	②	③	④	①	②	③	④
DEC (Digital)	①	②	③	④	①	②	③	④	①	②	③	④
Dell	①	②	③	④	①	②	③	④	①	②	③	④
Hewett Packard (HP)	①	②	③	④	①	②	③	④	①	②	③	④
IBM	①	②	③	④	①	②	③	④	①	②	③	④
NEC	①	②	③	④	①	②	③	④	①	②	③	④
Silicon Graphics	①	②	③	④	①	②	③	④	①	②	③	④
Sun Microsystems	①	②	③	④	①	②	③	④	①	②	③	④
Toshiba	①	②	③	④	①	②	③	④	①	②	③	④
Texas Instruments	①	②	③	④	①	②	③	④	①	②	③	④
Zenith	①	②	③	④	①	②	③	④	①	②	③	④
Software/Network Vendors												
Adobe	①	②	③	④	①	②	③	④	①	②	③	④
Auto-Desk	①	②	③	④	①	②	③	④	①	②	③	④
Borland	①	②	③	④	①	②	③	④	①	②	③	④
Cisco Systems	①	②	③	④	①	②	③	④	①	②	③	④
Claris	①	②	③	④	①	②	③	④	①	②	③	④
Computer Associates	①	②	③	④	①	②	③	④	①	②	③	④
Kaleida	①	②	③	④	①	②	③	④	①	②	③	④
Lotus	①	②	③	④	①	②	③	④	①	②	③	④
Macromedia	①	②	③	④	①	②	③	④	①	②	③	④
Microsoft	①	②	③	④	①	②	③	④	①	②	③	④
Netscape	①	②	③	④	①	②	③	④	①	②	③	④
NeXT	①	②	③	④	①	②	③	④	①	②	③	④
Novell	①	②	③	④	①	②	③	④	①	②	③	④
Oracle	①	②	③	④	①	②	③	④	①	②	③	④
Symantec	①	②	③	④	①	②	③	④	①	②	③	④
SPSS	①	②	③	④	①	②	③	④	①	②	③	④
WordPerfect	①	②	③	④	①	②	③	④	①	②	③	④

please go on to the next page ➨

J. Organization of Campus Computing and Technology Units

49. Is your campus part of a multicampus system with shared computing resources: ① no ② yes

50. Academic and administrative computing on your campus are: ① separate units ② one single unit

51. Has your institution reorganized academic or administrative computing within the past two years?
Academic Computing ① no ② yes *Administrative Computing* ① no ② yes

52. Do you anticipate a reorganization of academic or administrative computing within the next two years?
Academic Computing ① no ② yes *Administrative Computing* ① no ② yes

53. How does your campus coordinate academic and administrative computing operations? The heads of each unit report to:

Academic Computing	*Administrative Computing*
① president	① president
② provost (chief academic officer)	② provost (chief academic officer)
③ vice provost, (e.g., vp for info. svcs]	③ vice provost, (e.g., vp for administration]
④ dean	④ dean

54. Is your chief academic officer directly involved (or interested) in campus planning for instructional technology?
① not interested or involved ② interested ③ somewhat involved ④ directly involved

55. How does your institution deal with the "life cycle" issues affecting the institutional purchase (and upgrading/replacement) of desktop computers for faculty, classrooms, clusters, and labs?
① Most institutional purchases of desktop systems are acquired through a special one-time allocation or appropriation.
② Although we generally purchase equipment on a one-time allocation, we are developing a budget mechanism (or budget planning model) to help us routinely "acquire and retire" new technology.
③ We have a budget mechanism (or budget planning model) to help us routinely "acquire and retire" new technology.

56. From your perspective, how well does your institution prepare your students (i.e., undergraduates) for the technology skills they will need and technology challenges they will encounter over the next decade?

Academic Field/Program	Poor				Excellent
biological & physical sciences	①	②	③	④	⑤
business	①	②	③	④	⑤
education	①	②	③	④	⑤
engineering	①	②	③	④	⑤
fine & performing arts	①	②	③	④	⑤
humanities	①	②	③	④	⑤
social science	①	②	③	④	⑤

57. From your perspective, how well prepared are the faculty at your institution to use technology as a resource for instruction and scholarship?

	For Instruction					*For Scholarship & Research*				
	Poor				Excellent	Poor				Excellent
biological & physical sciences	①	②	③	④	⑤	①	②	③	④	⑤
business	①	②	③	④	⑤	①	②	③	④	⑤
education	①	②	③	④	⑤	①	②	③	④	⑤
engineering	①	②	③	④	⑤	①	②	③	④	⑤
fine & performing arts	①	②	③	④	⑤	①	②	③	④	⑤
humanities	①	②	③	④	⑤	①	②	③	④	⑤
social science	①	②	③	④	⑤	①	②	③	④	⑤

58. From your perspective, how well prepared are faculty and academic units to use the Internet and WWW as a resource for curriculum and instruction?

Academic Field/Program	Poor				Excellent
biological & physical sciences	①	②	③	④	⑤
business	①	②	③	④	⑤
education	①	②	③	④	⑤
engineering	①	②	③	④	⑤
fine & performing arts	①	②	③	④	⑤
humanities	①	②	③	④	⑤
social science	①	②	③	④	⑤
Overall Campus Preparation	①	②	③	④	⑤

please go on to the next page ➨

K. USES OF INFORMATION TECHNOLOGY

59. Please indicate the degree to which you agree or disagree with the following statements.

Ratings: ① Strongly Disagree (SD) ② Disagree ③ Agree ④ Strongly Agree (SA)

	SD	D	A	SA
Faculty here believe technology can enhance their classes and student learning.	①	②	③	④
Faculty have unreasonable expectations about user support services.	①	②	③	④
My president or provost has serious questions about the amount of money we are spending to support computing and information technology.	①	②	③	④
Technology has done much to improve instruction on my campus.	①	②	③	④
CD-ROMs will be an important source for content and instructional resources for our faculty and students over the next 2-3 years.	①	②	③	④
The Internet and WWW will be an important source for content and instructional resources for our faculty and students over the next 2-3 years.	①	②	③	④

L. CURRENT MICROCOMPUTER AND DESKTOP COMPUTER FACILITIES

60. What was the total *headcount* enrollment on your campus Spring 1995? |__|__|__|__|__|

61. What is your *best estimate* of the total number of *institutionally-owned* desktop computers and workstations on your campus as of May, 1995? (Please include systems in faculty offices and in labs, clusters, classrooms, residence halls, etc.) Desktop computers |__|__|__|__|__| Unix Workstations |__|__|__|__|__|

62. What is your *best estimate* of the percentage of institutionally-owned machines (in both offices and campus labs) that are connected to your campus network or a department network? |__|__|%

63. What is your *best estimate* of the total number of *personally-owned* desktop computers used on your campus as of May, 1995? (Include personally purchased systems owned by students and faculty.) |__|__|__|__|__|

64. What is your *best estimate* of the proportion of individuals in your campus community who have or own desktop computers? % students |__|__| % faculty |__|__| % administrators/staff |__|__|

65. What is your *best estimate* of the proportion of individuals in your campus community who have or own CD-ROMs for their computers? (*example:* 20% means that 20 percent of the computer owners/users have CD-ROMs for their systems). % students |__|__| % faculty |__|__| % administrators/staff |__|__|

66. Estimated total number of desktop computers (PCs and workstations) purchased by:

	1994-95	1995-96
students	|__|__|__|__|	|__|__|__|__|
faculty (personal & office/project use)	|__|__|__|__|	|__|__|__|__|
administrators/staff (personal & office/project use)	|__|__|__|__|	|__|__|__|__|
campus labs, clusters & other instructional use	|__|__|__|__|	|__|__|__|__|

67. Total number of *desktop computer labs, clusters,* and *classrooms* on your campus as of May 1995? |__|__|__|

68. How many of these computer labs/clusters/classrooms are specifically dedicated for use by individual departments or units (e.g., writing program, engineering, social science)? |__|__|__|

69. Total number of *desktop computers and workstations* in *all* the labs/classrooms/clusters on your campus as of May, 1995 Desktop Computers |__|__|__|__|__| Unix Workstations |__|__|__|__|__|

70. Percentage of computers in *all* the labs/classrooms/clusters on your campus that have CD-ROMs? |__|__|

71. What is your *best estimate* of the proportion/percentage of classes that use various kinds of computer and information technology resources:

- |__|__| computer-based classrooms or labs
- |__|__| computer-based simulations or exercises
- |__|__| presentation handouts
- |__|__| CD-ROM-based materials
- |__|__| electronic mail
- |__|__| commercial courseware
- |__|__| interactive data analysis and display
- |__|__| multimedia
- |__|__| Internet resources (from off-campus sources)
- |__|__| WWW page for class materials & resources

THANK YOU FOR YOUR ASSISTANCE!

PLEASE FOLD AND MAIL IN THE ENCLOSED POSTAGE-PAID ENVELOPE

Appendix C

Campuses Participating in the 1995 Campus Computing Survey

Abilene Christian University, TX
Alabama Agricultural & Mechanical Univ., AL
Alabama Southern Community College, AL
Alamance Community College, NC
Albertus Magnus College, CT
Albright College, PA
Alfred University, NY
Allen County Community College, KS
Alma College, MI
Alvernia College, PA
Alverno College, WI
Amarillo College, TX
American River College, CA
Ancilla College, IN
Anderson University, IN
Angelina College, TX
Appalachian State University, NC
Aquinas Junior College, MA
Arizona State University, AZ
Arkansas State University, AR
Arkansas Tech University, AR
Armstrong State College, GA
Asheville-Buncombe Technical Community College, NC
Ashland University, OH
Atlantic Christian College, NC
Atlantic Community College, NJ
Augusta College, GA
Augustana College, IL
Augustana College, SD
Austin Community College, MN
Averett College, VA
Avila College, MO

Babson College, MA
Bainbridge College, GA
Barstow College, CA
Baruch College of the City University of New York, NY
Bay de Noc Community College, MI
Beaufort County Community College, NC
Becker Junior College-Leicester Campus, MA
Becker Junior College-Worcester Campus, MA
Bellarmine College, KY
Belmont Abbey College, NC
Beloit College, WI
Bemidji State University, MN
Benedictine College, KS
Bergen Community College, NJ
Berkshire Community College, MA
Bethany College, KS
Bethany Lutheran College, MN
Bethel College, MN
Big Bend Community College, WA
Birmingham Southern College, AL
Black Hawk College-East Campus, IL
Black Hills State University, SD
Bloomfield College, NJ
Blue Mountain College, MS
Bowdoin College, ME
Bowling Green State University, OH
Bradford College, MA
Brainerd Community College, MN
Brazosport College, TX
Brescia College, KY
Brevard College, NC
Brigham Young Univ. -Main Campus, UT
Brookdale Community College, NJ
Brown University, RI
Brunswick College, GA
Brunswick Community College, NC
Butler County Community College, KS

Cabrini College, PA
Caldwell College, NJ
Caldwell Community College and Technical Institute, NC
Calif State Univ-Chico, CA
Calif State Univ-Fullerton, CA
Calif State Univ-Long Beach, CA
Calif State Univ-Los Angeles, CA
California Institute of the Arts, CA
California Lutheran University, CA
Campbellsville College, KY
Canisius College, NY
Carnegie Mellon University, PA
Carteret Community College, NC
Casco Bay College, ME
Casper College, WY
Castleton State College, VT
Catawba College, NC
Cedarville College, OH
Center for Creative Studies-- College of Art and Design, MI
Central Community College-Platte Campus, NE
Cerro Coso Community College, CA
Chadron State College, NE
Charles County Community College, MD
Chattahoochee Valley State Community College, AL
Chestnut Hill College, PA
Cisco Junior College, TX
Clatsop Community College, OR
Clayton State College, GA
Cleveland Community College, NC
Cleveland State Community College, TN
Cloud County Community College, KS
Clovis Community College, NM
Coastal Carolina Community College, NC
Coastline Community College, CA
Coffeyville Community College, KS
Cogswell College North, WA
Coker College, SC
Colby-Sawyer College, NH
College of Aeronautics, NY
College of Charleston, SC
College of Mount Saint Vincent, NY
College of Notre Dame of Maryland, MD
College of Santa Fe, NM
College of St. Scholastica, MN
College of St. Thomas, MN
College of the Atlantic, ME
College of the Canyons, CA
College of Wooster, OH
Colorado Mountain College, Alpine Campus, CO
Colorado Northwestern Community College, CO
Colorado Technical College, CO
Columbia College, MO
Columbia State Community College, TN
Columbia University, NY
Columbus College, GA
Community College of Allegheny County College Center-North, PA
Community College of Rhode Island, RI
Concordia College, IL
Concordia College, MN
Concordia College, OR
Connors State College, OK
Converse College, SC
Copiah-Lincoln Community College, MS
County College of Morris, NJ
Covenant College, GA
Crafton Hills College, CA
Creighton University, NE
Criswell College, TX
Cumberland College, KY
Cumberland University, TN
CUNY - Hunter College , NY
CUNY - LaGuardia Community College, NY

D'Youville College, NY
Dakota State University, SD
Dalton College, GA
Darton College, GA
Davidson College, NC
Defiance College, OH
Delaware Technical and Community College, Stanton/Wilmington Campus, DE
Delaware Valley College, PA
Denison University, OH
DePauw University, IN
Drake University, IA
Durham Technical Comm. College, NC

East Central Junior College, MS
East Tennessee State University, TN
East Texas State University, TX
East-West University, IL
Eastern Mennonite College, VA
Eastern Michigan University, MI
Eastern Montana College, MT
Eastern New Mexico University-Roswell, NM
Eastern Wyoming College, WY
Eckerd College, FL
Edison State Community College, OH
Elizabeth City State University, NC
Elizabethtown College, PA
Elon College, NC
Emmanuel College, MA
Essex Community College, MD
Evergreen State College, WA

Fergus Falls Community College, MN
Flagler College, FL
Florence-Darlington Technical College, SC
Florida Community College at Jacksonville, FL
Florida Memorial College, FL
Fontbonne College, MO
Forsyth Technical Community College, NC
Franklin and Marshall College, PA
Franklin College of Indiana, IN
Frederick Community College, MD
Freed-Hardeman College, TN
Fresno City College, CA

Gannon University, PA
Garden City Community College, KS
Garrett Community College, MD
Gateway Technical College, WI
Gavilan College, CA
Genesee Community College, NY
George Fox College, OR
George Washington University, DC
Georgetown College, KY
Georgia Institute of Technology, GA
Georgia Southern University, GA
Gogebic Community College, MI
Gordon College, MA
Goshen College, IN
Governors State University, IL
Grace College, IN
Graceland College, IA
Grove City College, PA
Gustavus Adolphus College, MN
Gwynedd-Mercy College, PA

Hamilton College, NY
Hanover College, IN
Harford Community College, MD
Harris-Stowe State College, MO
Haverford College, PA
Hawaii Pacific University, HI
Hawkeye Institute of Technology, IA
Haywood Community College, NC
Henry Ford Community College, MI
Herkimer County Community College, NY
Hobart and William Smith College, NY
Hofstra University, NY
Holy Family College, PA
Hope College, MI
Houghton College, NY
Housatonic Community College, CT
Huntington College, IN

Illinois Benedictine College, IL
Immaculata College, PA
Imperial Valley College, CA
Indian River Community College, FL
Indiana State University, IN
Indiana U-Purdue U at Indianapolis, IN
Indiana University of Pennsylvania, PA
Indiana University Southeast, IN
Indiana University-Purdue University at Fort Wayne, IN
Indiana Vocational Technical College-Central Indiana, IN
Indiana Vocational Technical College-Lafayette, IN
Iowa Lakes Community College, IA
Iowa State Univ of Science & Tech, IA
Irvine Valley College, CA
Isothermal Community College, NC
Itawamba Community College, MS
Ithaca College, NY
Ivy Tech State College, IN
IvyTech-Indiana's Technical College, IN

Jackson State University, MS
Jacksonville College, TX
Jacksonville State University, AL
James H. Faulkner State Junior College, AL
Jarvis Christian College, TX
Jefferson State Junior College, AL
John Brown University, AR
John C. Calhoun State Community College, AL
John Carroll University, OH
Johnson & Wales University, RI
Joliet Junior College, IL
Judson College, IL

Kankakee Community College, IL
Kansas State University, KS
Kaskaskia College, IL
Keene State College, NH
Kendall College of Art and Design, MI
Keystone College, PA

La Salle University, PA
Lakeland College, WI
Lakeshore Technical College, WI
Lamar University, TX
Lander College, SC
Lawrence Technologal University, MI
Lebanon Valley College, PA
Lee College, TN
Lee College, TX
Lewis University, IL
Lock Haven Univ. of Pennsylvania, PA
Long Beach City College, CA
Lord Fairfax Community College, VA
Los Angeles Mission College, CA
Louisiana College, LA
Louisiana State Univ., Shreveport, LA
Louisiana State University at Eunice, LA
Lower Columbia College, WA
Lycoming College, PA

MacMurray College, IL
Macon College, GA
Madonna University, MI
Manchester College, IN
Manchester Community College, CT
Manhattan College, NY
Manor Junior College, PA
Mansfield University of Pennsylvania, PA
Maranatha Baptist Bible College, WI
Marian College, IN
Marion Military Institute, AL
Marlboro College, VT
Marquette University, WI
Martin Methodist College, TN
Mary Washington College, VA
Marygrove College, MI
Maryland Institute, College of Art, MD
Marylhurst College, OR
Marymount College, Palos Verdes, California, CA
Maryville University, Saint Louis, MO
Master's College, CA
Mayland Community College, NC
Mayville State University, ND
McCook Community College, NE
McHenry County College, IL
McKendree College, IL
McMurry College, TX
Medaille College, NY
Memphis College of Art, TN
Mendocino College, CA
Merced College, CA
Mercer University, GA
Mercy College, NY
Michigan Technological University, MI
Middle Georgia College, GA
Middlesex County College, NJ
Midway College, KY
Millersville University of PA, PA
Milligan College, TN
Mineral Area College, MO
Mississippi College, MS
Mississippi Gulf Coast Community College, Perkinston Campus, MS
Mississippi State University, MS
Mississippi Valley State University, MS
Missouri Southern State College, MO
Mitchell Community College, NC
Moberly Area Community College, MO
Mobile College, AL
Mohave Community College, AZ
Molloy College, NY
Monmouth College, IL
Montana College of Mineral Science and Technology, MT
Montana State University, MT

Montclair State College, NJ
Moody Bible Institute, IL
Moraine Valley Community College, IL
Moravian College, PA
Morton College, IL
Mount Ida College, MA
Mount Marty College, SD
Mount Mary College, WI
Mount Olive College, NC
Mount Union College, OH
Mount Vernon Nazarene College, OH
Mt. Hood Community College, OR
Mt. San Jacinto College, CA

Nash Community College, NC
Nashville State Technical Institute, TN
Navarro College, TX
NEI College of Technology, MN
Neosho County Community College, KS
New College, Univ. of South Florida, FL
New Hampshire College, NH
New Jersey Institute of Technology, NJ
New Mexico Inst. of Mining & Technology, NM
New Mexico State University, Carlsbad, NM
Newberry College, SC
Nicholls State University, LA
North Adams State College, MA
North Harris County College District, TX
North Shore Community College, MA
Northampton County Area Community College, PA
Northcentral Technical College, WI
Northeast Iowa Technical Institute-Peosta Campus, IA
Northeastern State University, OK
Northern Arizona University, AZ
Northern Kentucky University, KY
Northern Michigan University, MI
Northland Pioneer College, AZ
Northwest Community College, WY
Northwest Missouri State University, MO
Northwest Nazarene College, ID
Northwestern Business College, IL
Norwalk Community College, CT
Notre Dame College of Ohio, OH

Oakland University, MI
Ohio Northern University, OH
Ohio State University-Mansfield Campus, OH
Ohio University-Chillicothe, OH
Ohio University-Eastern Campus, OH
Oklahoma Baptist University, OK
Old Dominion University, VA
Oral Roberts University, OK
Orangeburg-Calhoun Technical College, SC
Otterbein College, OH
Our Lady of Holy Cross College, LA

Palo Alto College, TX
Pan American University, TX
Paris Junior College, TX
Pasadena City College, CA
Pasco-Hernando Community College, FL
Passaic County Community College, NJ
Penn Valley Community College, MO
Pennsylvania State Univ. at Harrisburg, PA
Pennsylvania State University - Hazelton Campus, PA
Pennsylvania State University Allentown Campus, PA
Pennsylvania State University Altoona Campus, PA
Pennsylvania State University Worthington Scranton Campus, PA
Pennsylvania State University York Campus, PA
Piedmont Community College, NC
Piedmont Technical College, SC
Pikeville College, KY
Plymouth State College, NH
Polytechnic University, Brooklyn Campus, NY
Pomona College, CA
Potomac State College of West Virginia University, WV
Prairie View A&M University, TX
Presbyterian College, SC
Purdue University-Main Campus, IN

Queen of the Holy Rosary College, CA
Queens College, NC
Quincy College, MA
Quinebaug Valley Community College, CT
Quinnipiac College, CT

Rainy River Community College, MN
Randolph-Macon College, VA
Randolph-Macon Woman's College, VA
Ranger College, TX
Rappahannock Community College, VA
Red Rocks Community College, CO
Reed College, OR
Regis University, CO
Reinhardt College, GA
Rhodes College, TN
Richard Bland College, VA
Ripon College, WI
Roane State Community College, TN
Rockhurst College, MO
Rocky Mountain College, MT
Rogue Community College, OR
Rollins College, FL

Saginaw Valley State University, MI
Saint Charles County Community College, MO
Saint Francis College, PA
Saint Joseph College, CT
Saint Joseph's College, IN
Saint Leo College, FL
Saint Martin's College, WA
Saint Mary's College, IN
Saint Mary's College, NC
Saint Mary-of-the-Woods College, IN
Saint Michael's College, VT
Salem-Teikyo University, WV
Salisbury State University, MD
San Jacinto College-South Campus, TX
San Juan College, NM
Santa Fe Community College, NM
Santa Monica College, CA
Schreiner College, TX
Seattle Pacific University, WA
Seton Hall University, NJ
Sheldon Jackson College, AK
Shepherd College, WV
Shimer College, IL
Shippensburg University of Pennsylvania, PA
Shoreline Community College, WA
Shorter College, GA
Siena College, NY
Silver Lake College, WI
Simon's Rock of Bard College, MA
Simpson College, IA
Sinclair Community College, OH
Skagit Valley College, WA
Skidmore College, NY
Snead State Junior College, AL
South Georgia College, GA
South Plains College, TX
South Puget Sound Community College, WA
South Suburban College, IL
Southeast Community College, Beatrice Campus, NE
Southeast Community College, Milford Campus, NE
Southeast Missouri State University, MO
Southeastern Baptist Theological Seminary, NC
Southeastern Community College, North Campus, IA
Southeastern Illinois College, IL
Southeastern Louisiana University, LA
Southern Arkansas University, AR
Southern Arkansas University Tech, AR
Southern California College, CA
Southern Methodist University, TX
Southern Nazarene University, OK
Southern Wesleyan University, SC
SouthWest Collegiate Institute for the Deaf, TX
Southwest Texas State University, TX
Southwestern Adventist College, TX
Southwestern College, AZ
Southwestern Community College, IA
Southwestern Oklahoma State University, OK
Spokane Falls Community College, WA
St. Catharine College, KY
St. Francis College, NY
St. John's College, NM
St. Johns River Community College, FL
St. Lawrence University, NY
St. Louis Community College at Forest Park, MO

St. Louis Community College at Meramec, MO
St. Mary's College of Maryland, MD
St. Mary's University of San Antonio, TX
St. Olaf College, MN
Standing Rock College, ND
Stephen F. Austin State University, TX
Stephens College, MO
Sterling College, KS
Stetson University, FL
Stillman College, AL
Sullivan County Community College, NY
SUNY College at Brockport, NY
SUNY College at Geneseo, NY
SUNY College of Environmental Science & Forestry, NY
SUNY- College at Cobleskill, NY
SUNY-College of Technology at Alfred, NY
Suomi College, MI
Susquehanna University, PA

Tarleton State University, TX
Tarrant County Junior College, TX
Teikyo Marycrest University, IA
Temple Junior College, TX
Tennessee Technological University, TN
Tennessee Wesleyan College, TN
Texas A&M University, TX
Texas Christian University, TX
Texas Lutheran College, TX
Texas Southern University, TX
Texas Wesleyan University, TX
The Ohio State University, OH
Thomas A. Edison State College, NJ
Thomas More College, KY
Transylvania University, KY
Tri-County Community College, NC
Tri-County Technical College, SC
Trinity Christian College, IL
Trinity International University, IL
Trinity University, TX
Troy State University at Dothan, AL
Tufts University, MA

Umpqua Community College, OR
Union College, NY
Union County College, NJ
United States Coast Guard Academy, CT
United States Naval Academy, MD
University of Akron, OH
University of Alaska CCREE, AK
University of Alaska Southeast, AK
University of Alaska Southeast, Ketchikan Campus, AK
University of Arizona, AZ
University of Arkansas at Monticello, AR
University of Baltimore, MD
University of California, Irvine, CA
University of Charleston, WV
University of Findlay, OH
University of Hartford, CT
University of Hawaii at Hilo, HI
University of Hawaii-Kapiolani Community College, HI
University of Hawaii-Kauai Community College, HI
University of Hawaii-Leeward Community College, HI
University of Hawaii-West Oahu, HI
University of Houston-Downtown, TX
University of Idaho, ID
University of Iowa, IA
University of Kentucky, Somerset Community College, KY
University of Maine at Fort Kent, ME
University of Maine at Presque Isle, ME
University of Maryland, College Park, MD
University of Miami, FL
University of Missouri-Saint Louis, MO
University of Nevada, Reno, NV
University of Nevada-Las Vegas, NV
University of New Mexico, NM
University of New Mexico-Gallup , NM
University of New Mexico, Valencia Campus, NM
University of New Orleans, LA
University of North Carolina, Chapel Hill, NC
University of North Carolina, Charlotte, NC
University of North Carolina,Wilmington, NC
University of North Dakota-Lake Region, ND
University of North Texas, TX
University of Notre Dame, IN
University of Pittsburgh, PA
University of Pittsburgh at Titusville, PA
University of Redlands, CA
University of Rochester, NY
University of San Diego, CA
University of Science and Arts of Oklahoma, OK
University of South Carolina at Spartanburg, SC
University of South Carolina at Union, SC
University of South Carolina, Columbia, SC
University of Southern California, CA
University of Southern Colorado, CO
University of Southwestern Louisiana, LA
University of Tennessee at Chatanooga, TN
University of Texas at Austin, TX
University of the South, TN
University of Utah, UT
University of Virginia, VA
University of Washington, WA
University of Wisconsin Center - Manitowoc County, WI
University of Wisconsin Center-Fond du Lac, WI
University of Wisconsin Center-Sheboygan County, WI
University of Wisconsin Center-Waukesha County, WI
University of Wisconsin-Eau Claire, WI
University of Wisconsin-Green Bay, WI
University of Wisconsin-Parkside, WI
University of Wisconsin-Superior, WI
Ursuline College, OH

Valley City State University, ND
Valparaiso University, IN
Vanderbilt University, TN
Villa Maria College of Buffalo, NY
Vincennes University-Jasper Center, IN
Virginia Highlands Community College, VA
Virginia Military Institute, VA
Virginia Wesleyan College, VA
Viterbo College, WI

Wagner College, NY
Wake Forest University, NC
Wake Technical Community College, NC
Waldorf College, IA
Walker College, AL
Walla Walla College, WA
Warren Wilson College, NC
Wartburg College, IA
Washington and Jefferson College, PA
Waycross College, GA
Webber College, FL
Webster University, MO
Wenatchee Valley College, WA
Wentworth Military Academy and Junior College, MO
West Liberty State College, WV
West Los Angeles College, CA
West Texas A&M University, TX
Westbrook College, ME
Westchester Community College, NY
Western Carolina University, NC
Western Kentucky University, KY
Western New England College, MA
Western Oregon State College, OR
Western Piedmont Community College, NC
Western Texas College, TX
Western Wyoming Community College, WY
Westminster College, MO
Willamette University, OR
William Penn College, IA
Wilmington College, OH
Winston-Salem State University, NC
Winthrop University, SC
Wisconsin Lutheran College, WI
Woodbury University, CA
Worthington Community College, MN

York College, CUNY, NY
Youngstown State University, OH

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